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# III.

# VETOR NORTE

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Autumn Semester 2013

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# III.

## VETOR NORTE

### A DISPUTED TERRITORY

#### TERRITORIAL DEFINITIONS

**Many Norths**  
**A Fragile Landscape**

#### ISLANDS AND SEA

**An Informal Sea**  
**Borders or Boundaries**  
**Planned Islands**

#### INFRASTRUCTURE AND SOIL

**A large Network of Railway**  
**Benefiting from the Soil**  
**A Radial Roadnetwork out of the City**

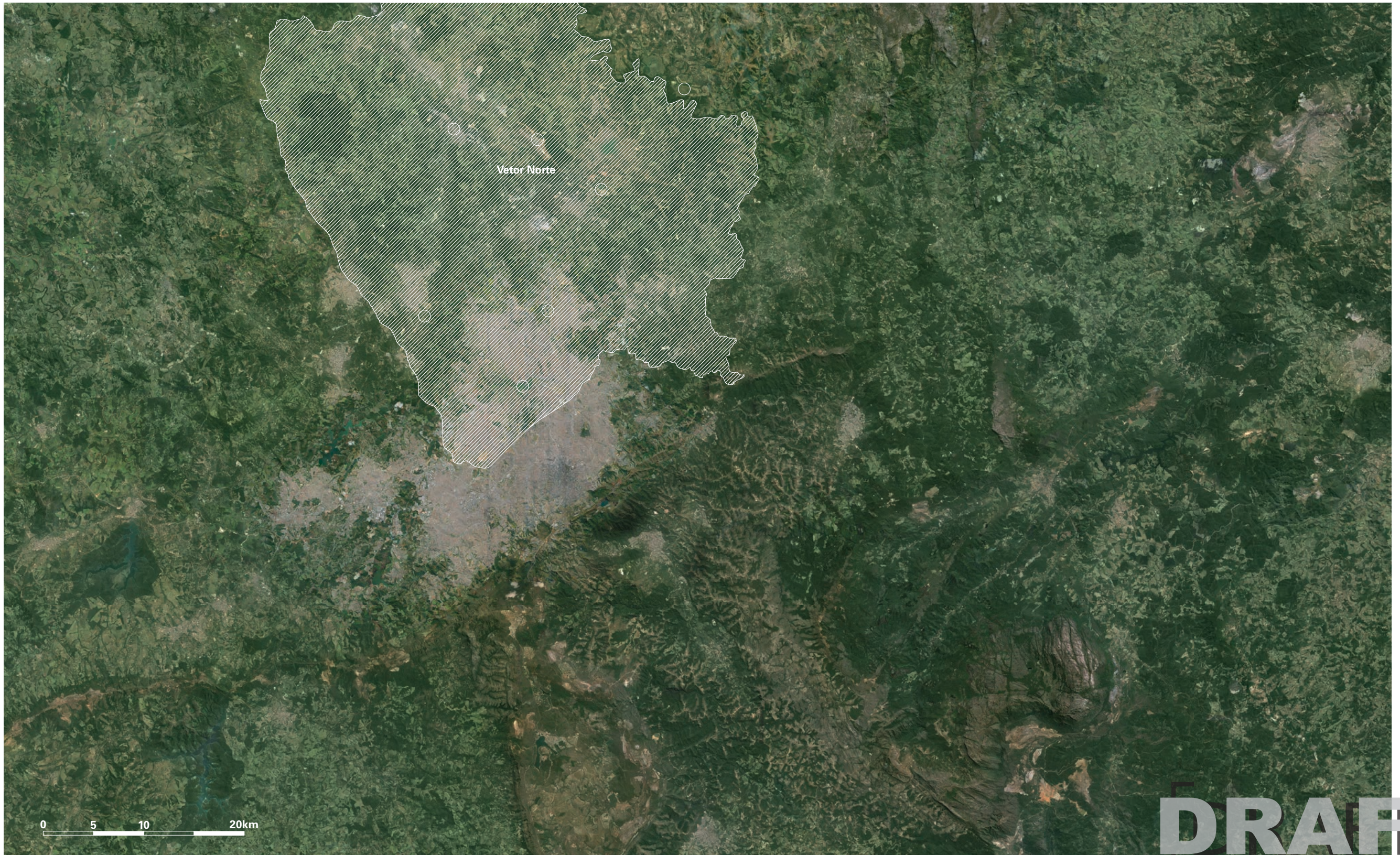
**“IN THE NORTH THERE IS FREE LAND”**  
**Match São Paulo**

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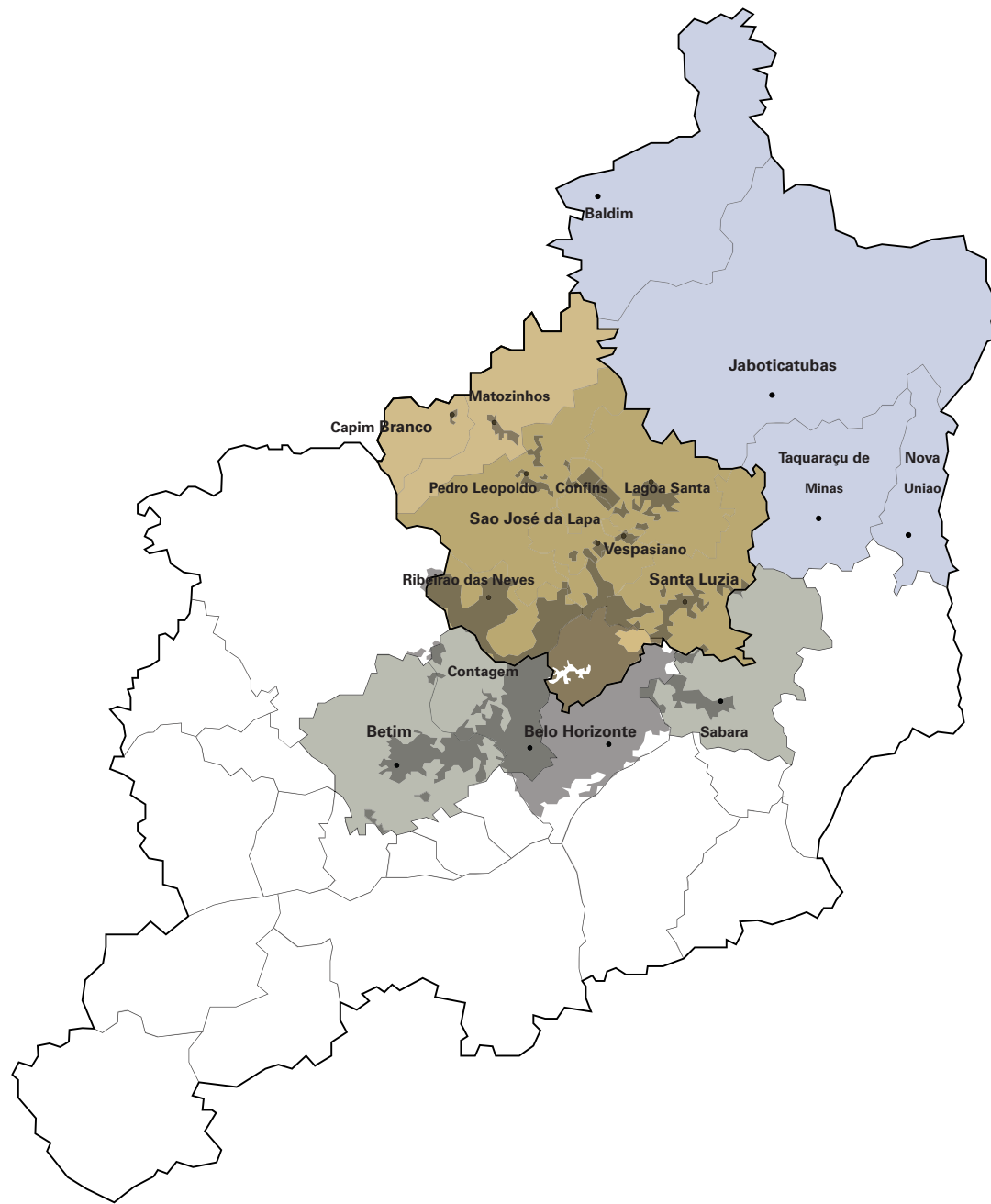
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## TERRITORIAL DEFINITIONS

**The Vetor Norte of Belo Horizonte is one of the most important expansion directions from the City center. Its definition underlies an uncoordinate structure of public planning actors complicating the handling of a region already affected by diverse generators of urbanisation.**





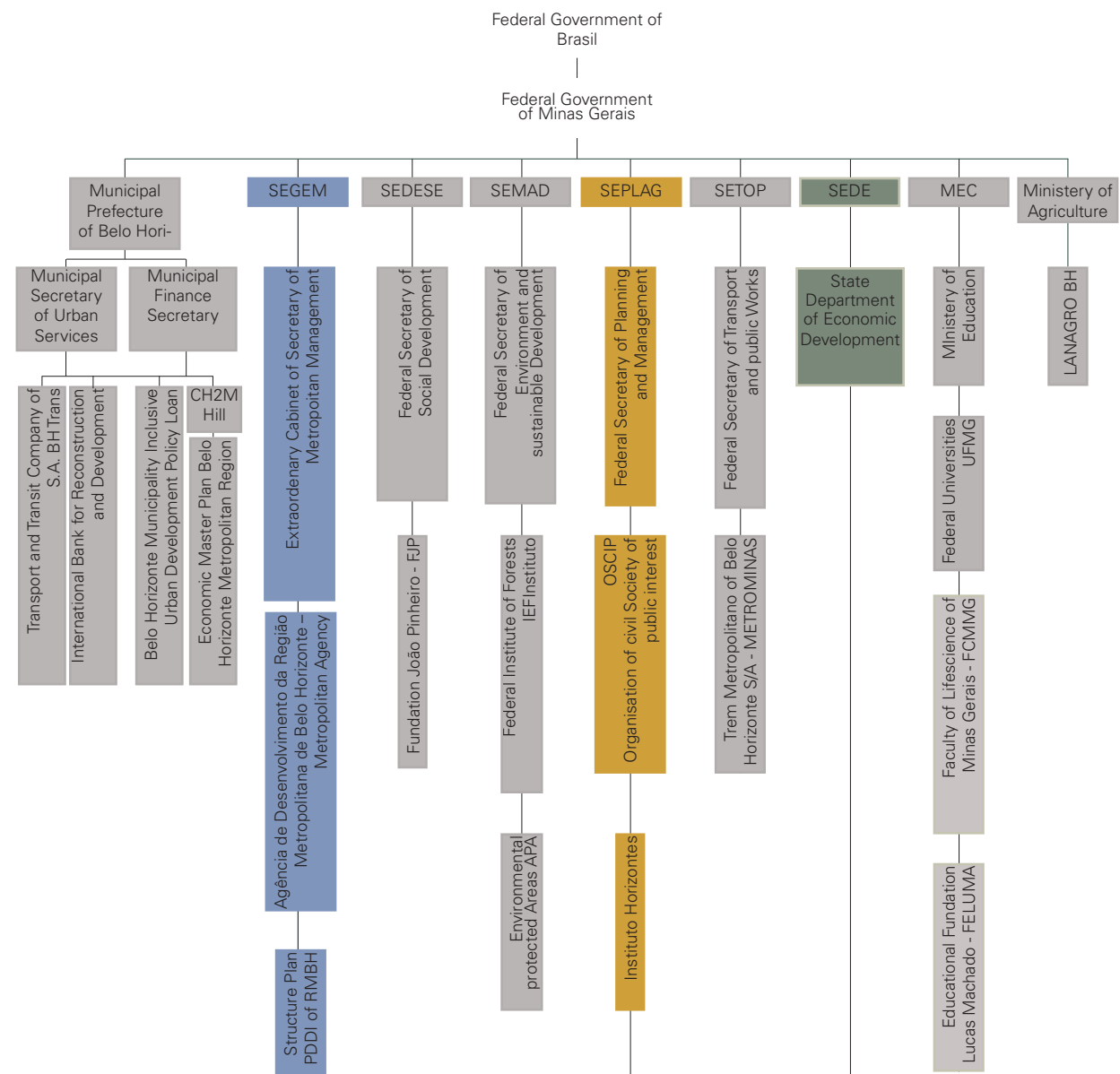
Definition of the Vetor Norte by different Planning Actors:

- Planning Secretary
- SEDE Department for Economy of Minas Gerais
- Metropolitan Agency of Belo Horizonte
- Urban area
- Municipalities of the Metropolitan Region RMBH
- Metropolitan Region of Belo Horizonte

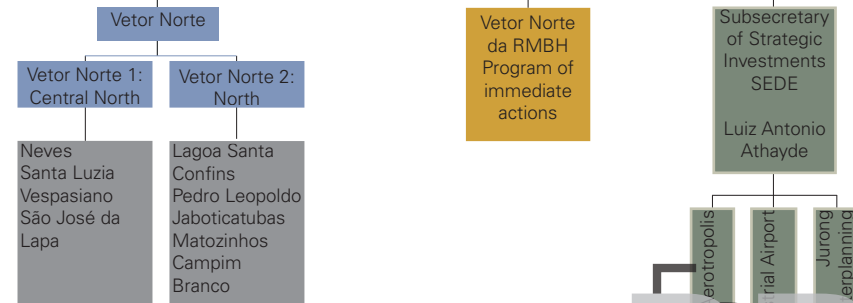


### Many Norths

Because of the size of the territory and its diverse characteristics, various actors define different Vetor Norte. Speaking of economic power of Belo Horizonte, it will be linked to the industrial cities Betim and Contagem; the administrative definition is excluding the center and including municipalities less integrated in the metropolitan region, while planning actors chose a territory after an interesting urban development.



### Definitions:



Public Planning Actors





**Areas of Study**

ISLANDS AND SEA

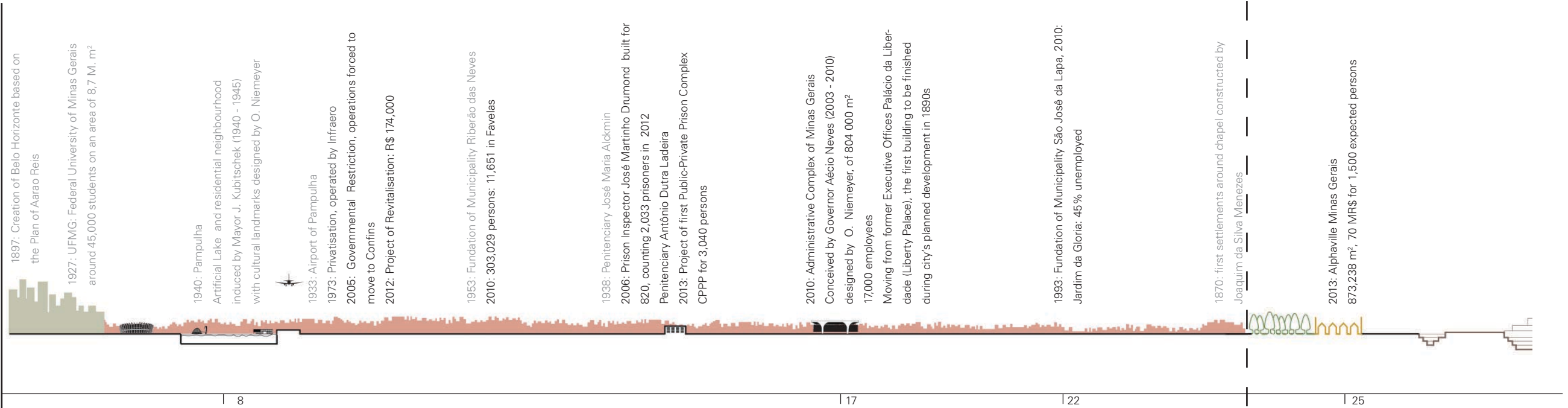
- 1 Venda Nova
- 2 Ribeirão das Neves
- 3 Linha Verde
- 4 Pampulha
- 5 Cidade Administrativa of Minas Gerais

6 International Airport of Confins

- 7 Aerotropolis
- 8 APA Carste

SOIL AND INFRASTRUCTURE

- 9 Rail and Soil Resources
- 10 Road and Real Estate



1950



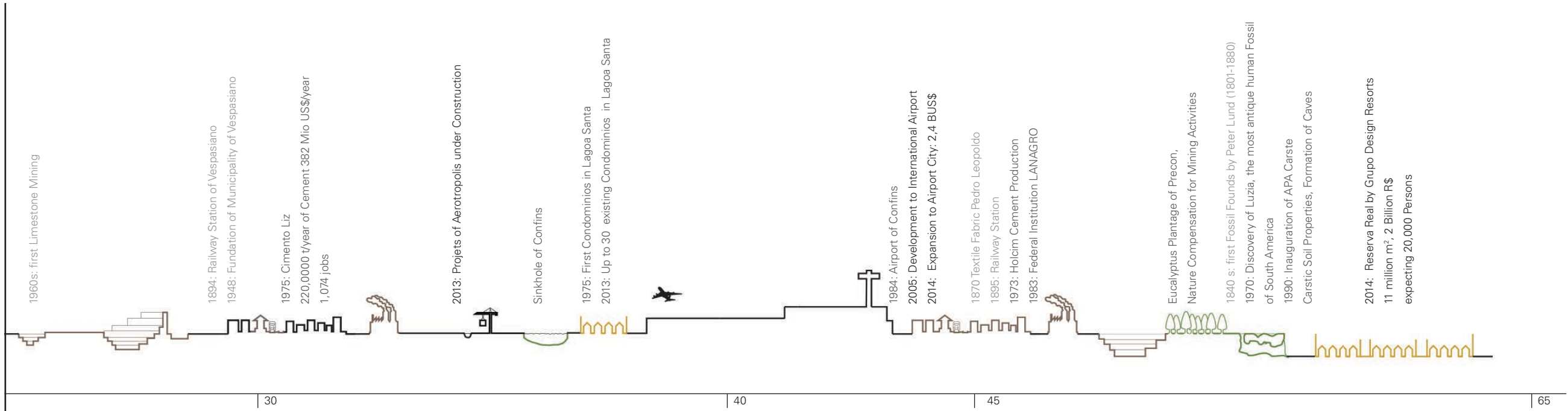
1980



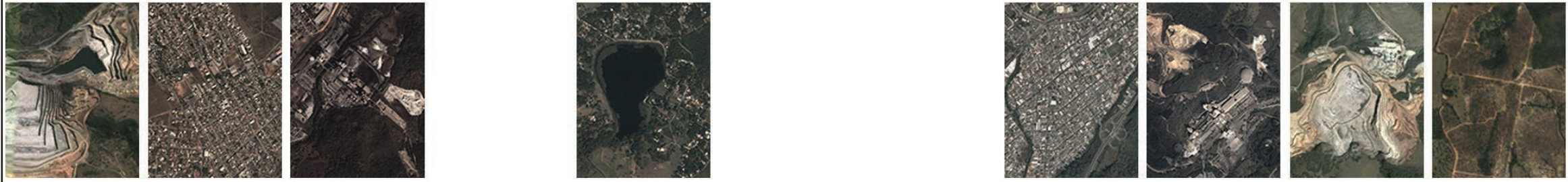
2010



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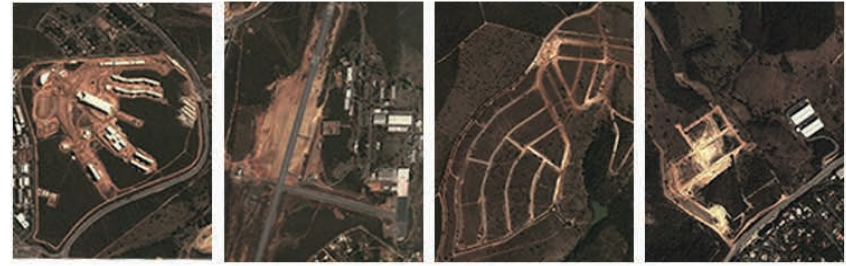
1950



1980

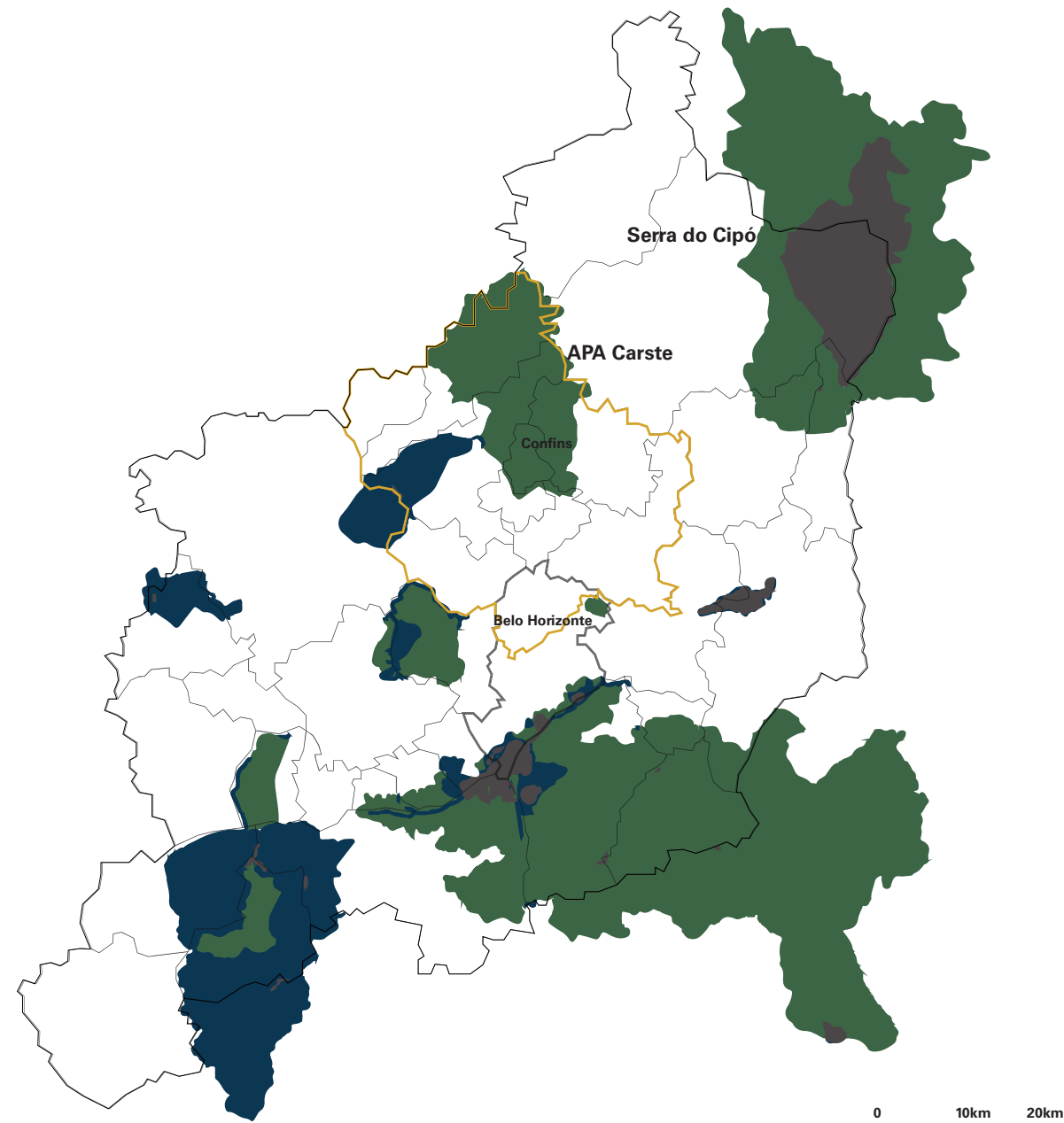


2010



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- APA: Área de Proteção Ambiental  
Areas of environmental protection
- APEE: Áreas de Proteção Especial Estadual  
Areas of special public protection
- Entirely protected Zones
- Metropolitan Region of Belo Horizonte
- ▬ Vetor Norte

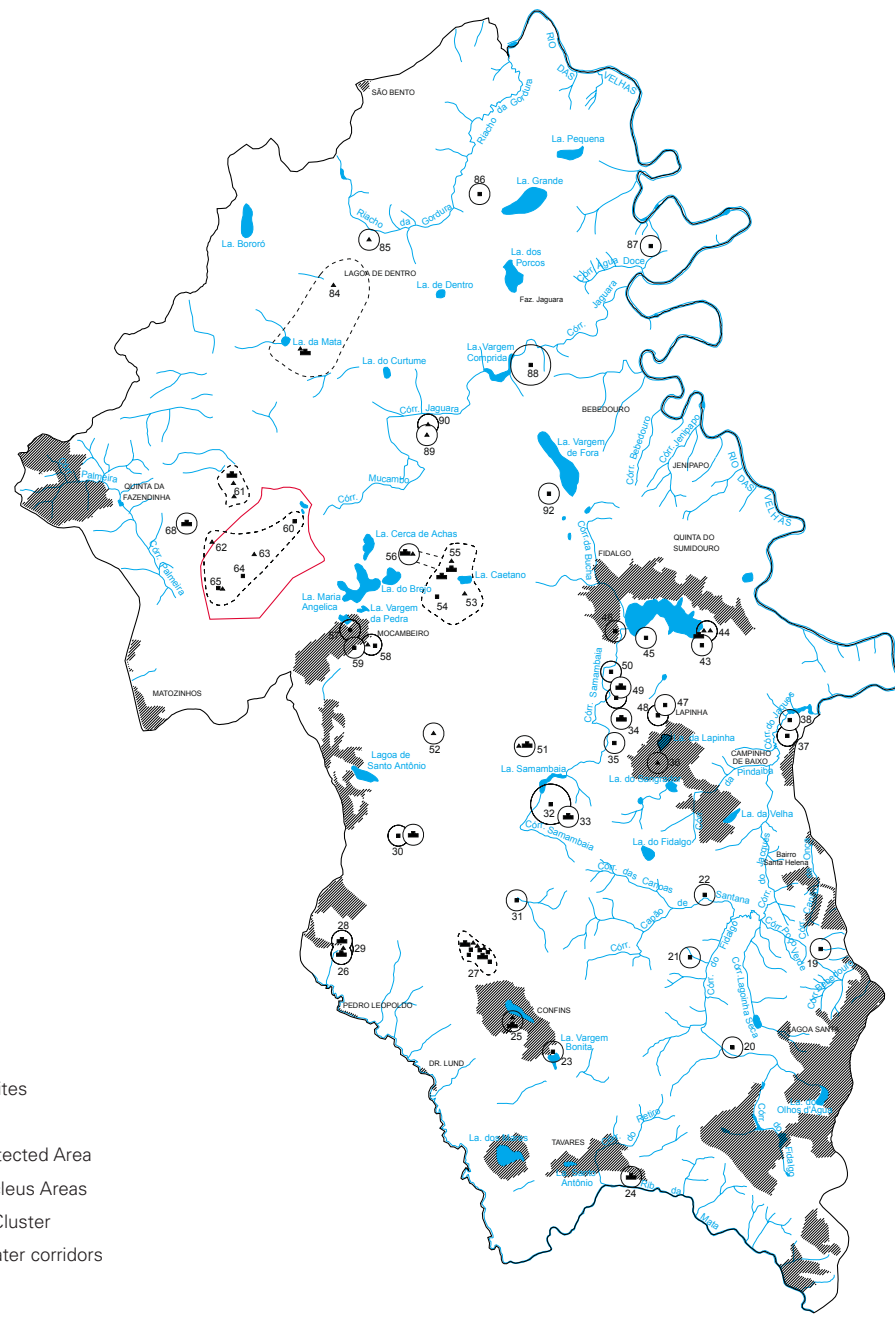
### A fragile landscape

The northern Area is defined by a highly hydrophic land and river basins, who became protected by the Government by a federal Law in 1979 in order to preserve the natural sources, cultural heritage, historical and archeological stock. The territory includes the municipalities of Confins, Lagoa Santa, Pedro Leopoldo and Matozinhos of the northern Vector of the Metropolitan Region.



Cristal clear Water in the Protected Area of Serra do Cipó

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### APA Carste of Lagoa Santa

The Area of Environmental Protection is predominated by carstic relief, mainly carstic rocks. The important quantity of ground water due to the fragile and permeable surface is regulated by a subtle equilibrium. The Carst contains sites of limestone execution, eroded surfaces, hanging arches opening to underground caves, sinkholes and lakes of cristaline water.



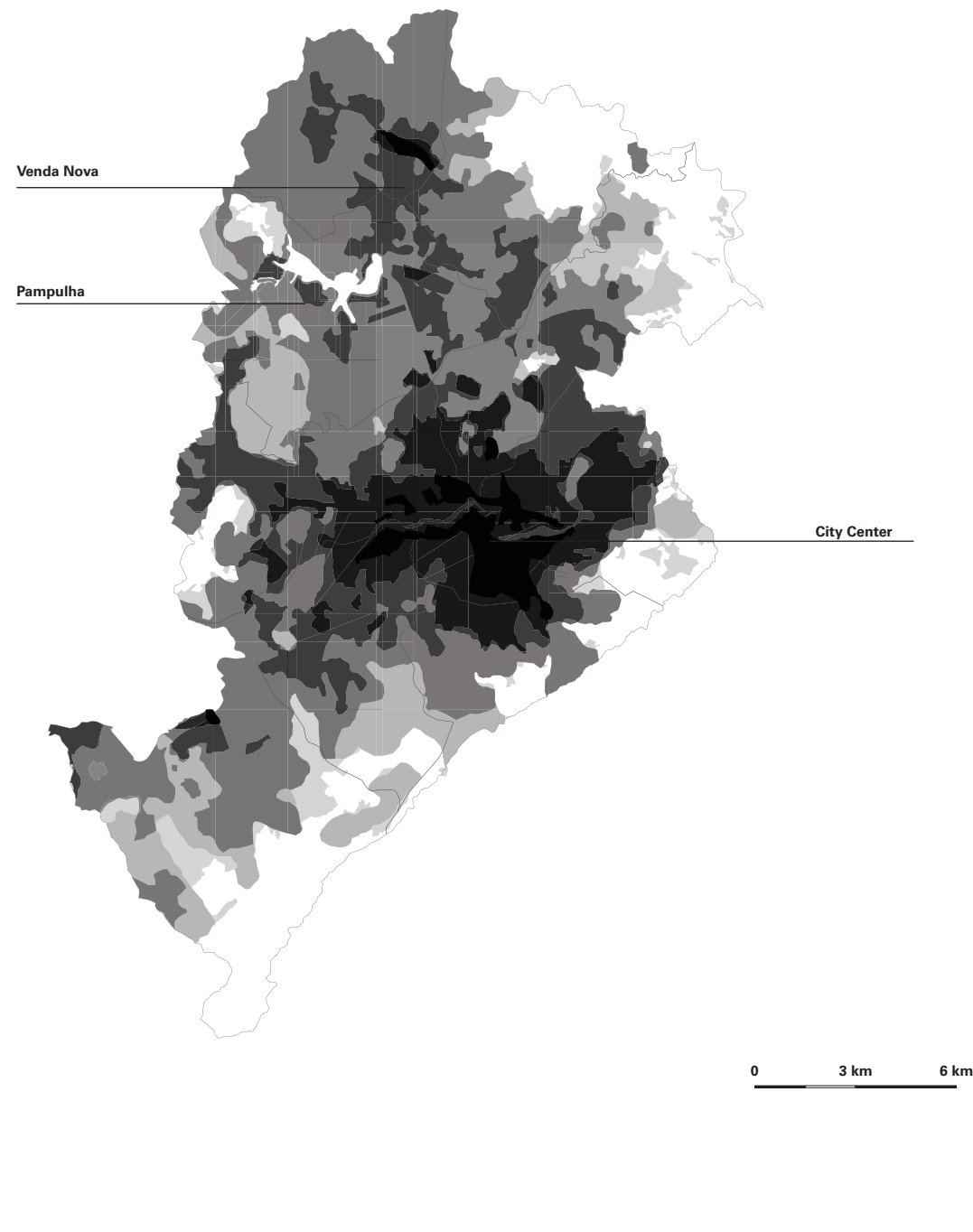
Roof of a carstic Cave, APA Carste, Lagoa Santa

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## ISLANDS AND SEA

The Vetor Norte Central has been constantly transformed in the past sixteen years. On one hand, the attempt of converting landscape into landmark generated planed islands. On the other hand, the unattended urge of housing induced a sea of low rise, simple constructions. Both the rural exodus and the ambitions of a representative Capital have been shaping a constracted territory.





- 1935
- 1950
- 1977
- 2000

### An informal sea

At the beginning of the 20<sup>th</sup> century, the region of the actual district of Venda Nova was a farmland. With the creation of the Pampulha complex in the 40's and the announced urban reform, a lot of farmers were urged to sell their land. The rural exodus in the 70's induced a significant migration to the cities. Migrants looking for cheap free land rapidly settled in the north of Belo Horizonte. Because of the demographic explosion and the lack of public investment in infrastructure, the land stayed in some areas over decades with a very precarious situation.



Belo Horizonte with its various urban structures.



Rua Claudio Manoel, 1928

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0 100m 500m

### Venda Nova: A dense urban fabric

The missing planning and the fast settlement of people in the region of Venda Nova created a dense and orderless urban fabric. Only the two main roads, the Avenida Vilarinho and the Rua Padre Pedro Pinto, connect

Ribeirão das Neves to the Linha Verde, the main highway leading to the center. Today, Venda Nova is a commercial and residential district with an low average salary and a high population density of 9261,4 inhabitants per km<sup>2</sup>.



### Unactivated urban space

Since the area has not been planned, the urban space is not attractive and stays quiet empty.



### Gathering together

The dense urban fabric is interrupted by waste land, mostly football fields, which play the role of public spaces.

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### An informal expansion

The process of informal settling is still happening in the Central North. However, the reason for the territorial expansion has moved from rural exodus and internal migration to the land valorisation. Low class people can not afford their location anymore and have to settle farther

from the city center. Because the formal process of registrating a new house takes too long and is expensive, they settle informally on new land without infrastructure, sometimes very quickly. Almost a quarter of the whole population of Belo Horizonte lives in informal dwellings.



### Legalising the informal

The “land regularisation” appeared in 1983 in order to fight the informality and to control the informal expansion. The requester asks for a regularisation of his house in order to have more security and to increase the value of his house. The process lasts about six months goes through land registry and georeferencing to finally obtain a land title.



### A poisoned gift

In the past decade, the government facilitated the consumption of goods for everyone: “Everyone should have a car”. On one hand, mobility became accessible, on the other hand, the traffic increased significantly and low classe people only gained a restricted mobility. A lot of people still depend on buses or go by feet.



### Ribeirão das Neves: An isolated ghetto

Neves is a municipality of the Central North, a poor neighbourhood located in the west of the district of Venda Nova. Since there are only a few job opportunities, it is considered as a dormitory town.



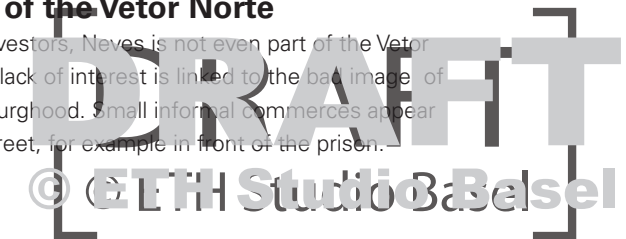
### “Let us protect our children”

Driving out of the town, one can notice this sign where people are requested to denounce violence on children. Neves is famous for a high criminality rate. It is also known for being the seat of a huge prison.



### Left out of the Vetor Norte

For some investors, Neves is not even part of the Vetor Norte. Their lack of interest is linked to the bad image of the neighbourhood. Small informal commerces appear along the street, for example in front of the prison.

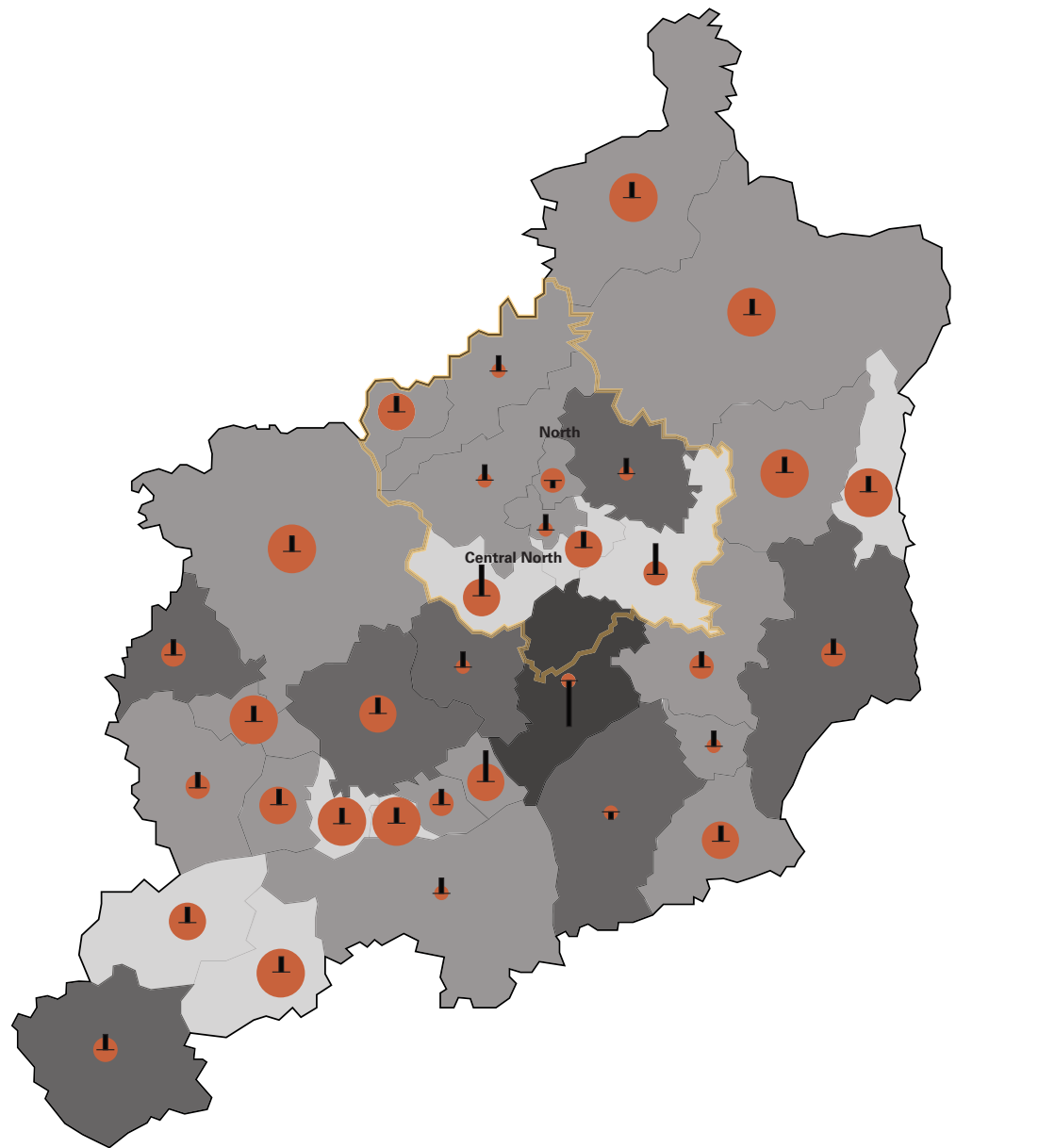




### Borders or Boundaries

“Think, don’t vote”. From Jardim da Gloria, a very poor neighbourhood of the Central North, the highway, supposed to be a connection, appears like a wall. Roads connect strategic points but do not necessarily increase the mobility of everyone. The gap between social classes is still deepening and can be felt in urban spaces.





Human development index

- 0,841-0,900
- 0,781-0,840
- 0,731-0,781
- 0,685-0,731

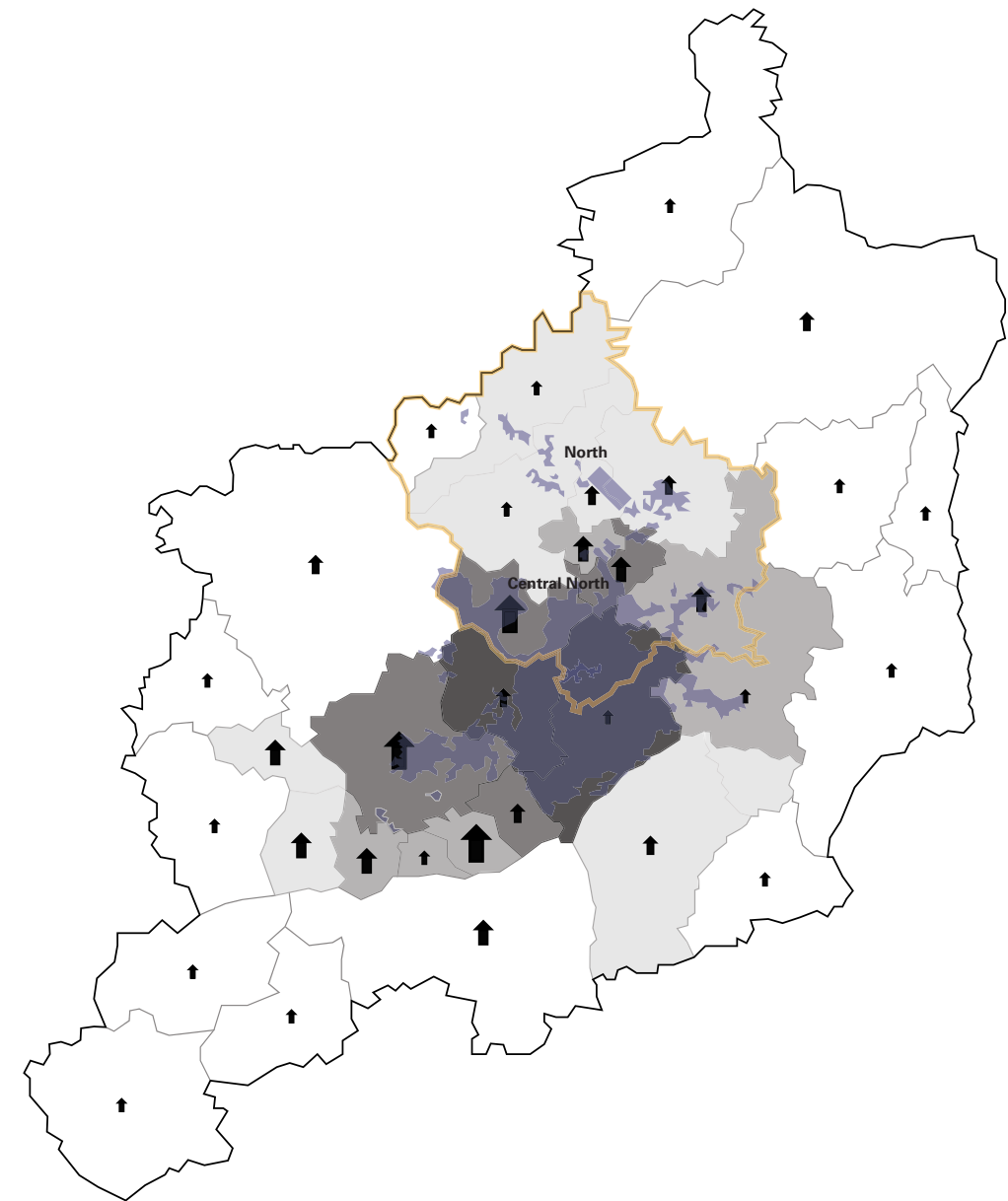
people commuting out  
 people commuting in  
 Percentage of poor people

0 10km 30km

### Two Norths: social Disparities

The monocentric model induces a strong dependence of the periphery to the center. The Central North is especially dependent to the center because of its lacking job opportunities, while the North is more independent, with

among others the Airport of Confins generating jobs. Moreover, a parallel can be established between the Central North and the South West, counting similar high poor rate and medium human development indexes.



Growth rate

0% to 7,5% per year

Population density

- 3000 to 13'300 in./km<sup>2</sup>
- 1000 to 3000
- 300 to 1000
- 100 to 300
- until 100

0 10km 30km

### Different Dynamics

The main expansion vectors are the north and the west, which can be shown with the higher population density in these regions. Again, the Central North follows a different development than the North, growing faster and posting higher population density.



### Interdependence

Some commuters are waiting patiently at the bus station, where a tent was added to protect them from the sun. The city is dependent of its workers and the workers are

dependent of the job opportunities, concentrated in the city. There is not only a urge for decentralisation, but also of better bus connections.



### A segregating Urban Space

At the beginning of the Avenida Cristiano Machado, a part of the Linha Verde leading to the north, is a road overpass. The city opens up a way to the north and overcomes the obstacle of houses through tunnels and elevated street, which induces a disconnection with the ground and the commerces underneath to go under.



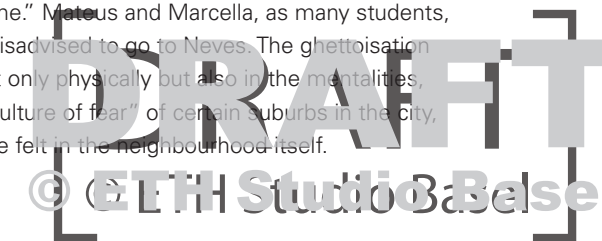
### Different Realities

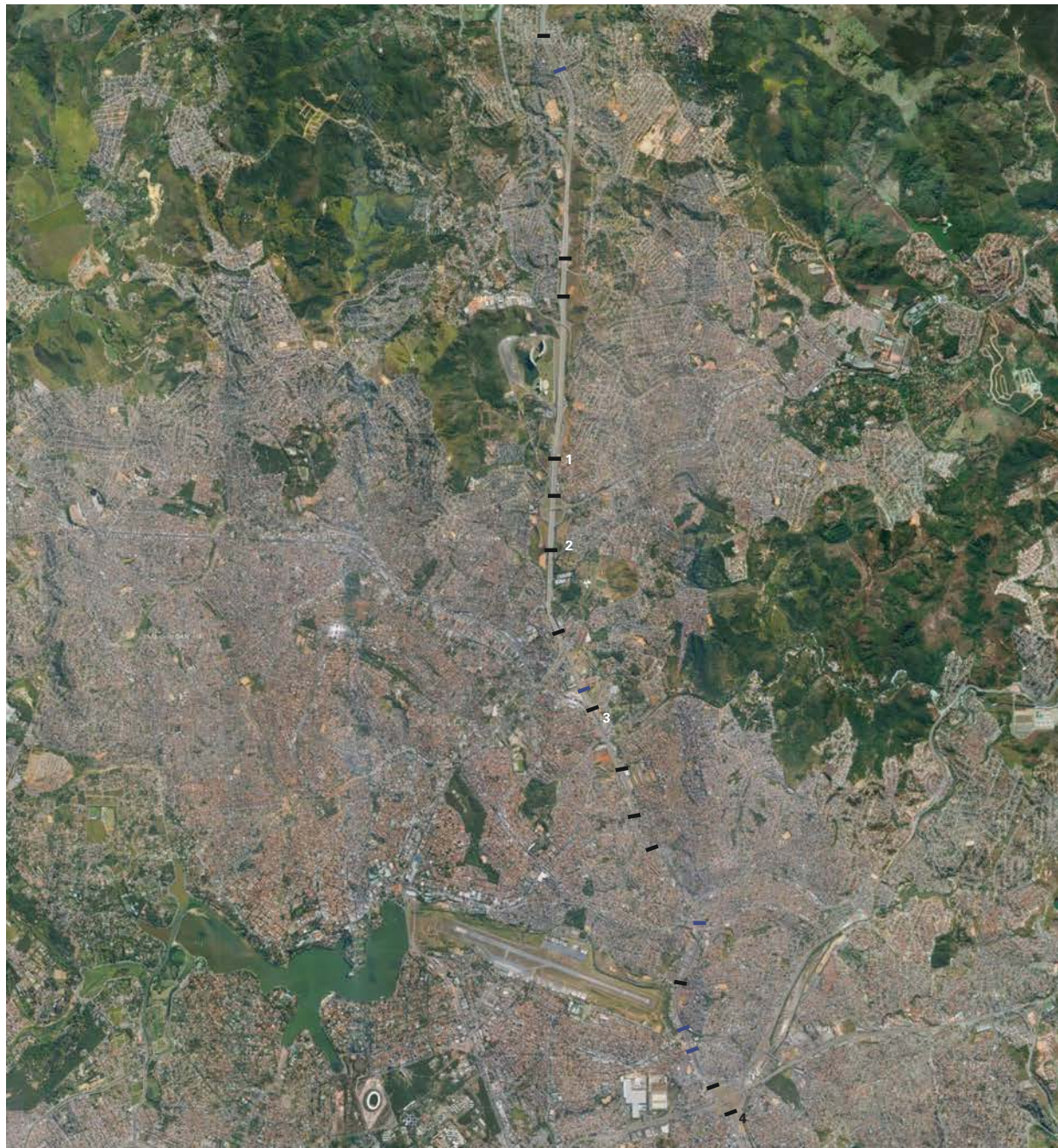
A worker appears like a shadow on the ground floor of the Administration Center. The Center employs about 3000 people. Among them, there are not only state employees but also a lot of workers. Still, everyone lives his life from his part.



### Ghettoisation

“We have never been to Neves. It is not recommended to go there alone.” Mateus and Marcella, as many students, have been disadvised to go to Neves. The ghettoisation happens not only physically but also in the mentalities, there is a “culture of fear” of certain suburbs in the city, which can be felt in the neighbourhood itself.





■ bridges for pedestrian

■ zebra crossing

0 1km 3km

### The Way to the North

The Linha Verde is one of the biggest road project of the past years in Belo Horizonte. The project includes the Boulevard Arrudas, the Avenida Cristiano Machado and the highway MG-010. For the last road, the CODEMIG (Company of economic development of Minas Gerais) invested 100 millions R\$.



1



2



3



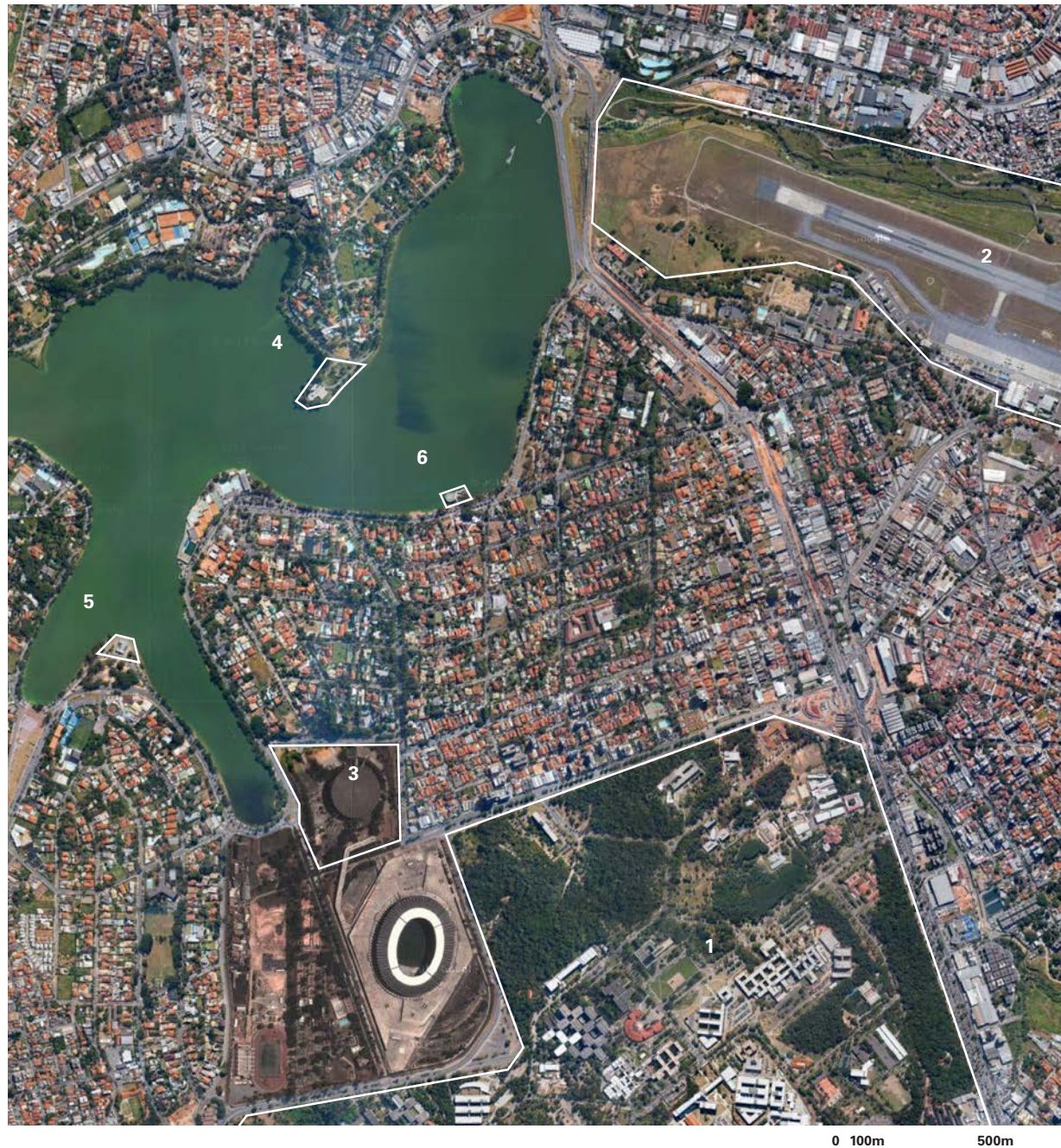
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### A deep Cut in a Sea of Houses

The Linha Verde leads directly to the Airport and Lagoa Santa and 3,5 millions of persons should benefit from this road. It is part of the economic strategy to develop the Airport of Confins and its influence range. It crosses the high dense, poor area of Venda Nova.



1



2



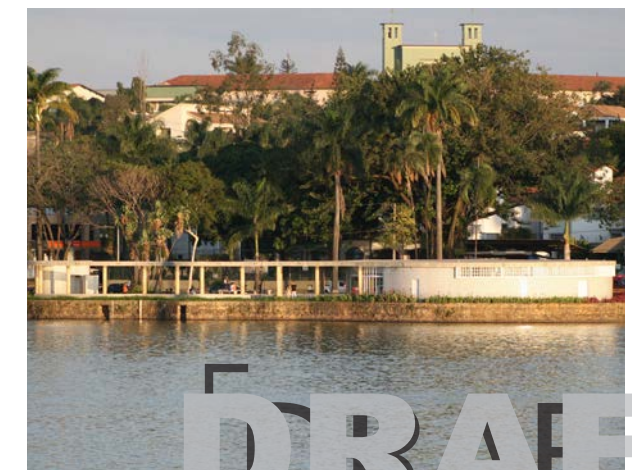
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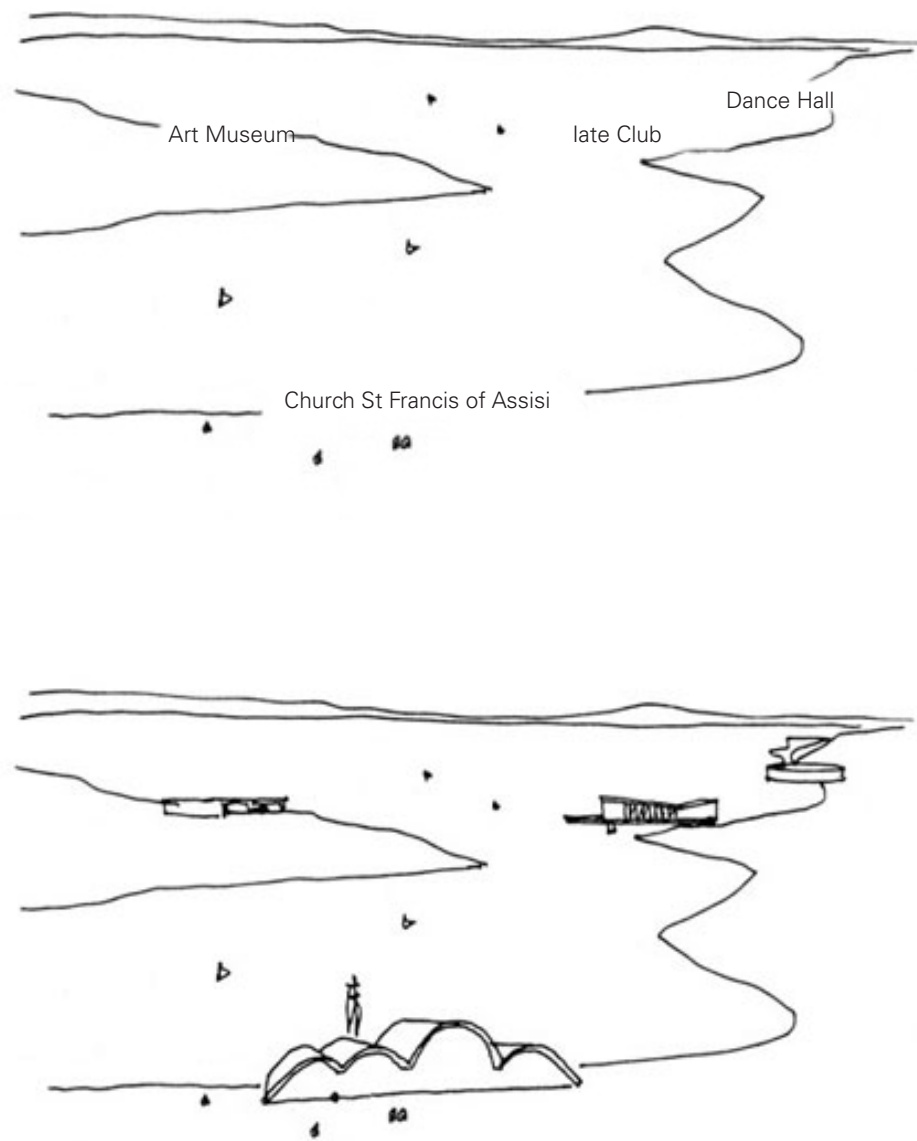
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6

### Planned Islands

The north of Belo Horizonte has always represented the dream of infinite possibilities. The Airport of Pampulha (2) was built in 1933 as a military base in order to connect Rio de Janeiro with Fortaleza. In the 40's, the visionary and at the time prefect of the city Juscelino Kubitschek had the idea of Pampulha. Oscar Niemeyer designed the Church St Francis of Assisi (3), the Dance Hall (6) and the Art Museum (4), which made the site to an attraction of Belo Horizonte. Later, as the University of Minas Gerais (1) became a federal University, the campus was moved to Pampulha. The Stadium Mineirão, built in 1965, soon became a symbol for the city, followed by the Mineirinho (5) seven years later.

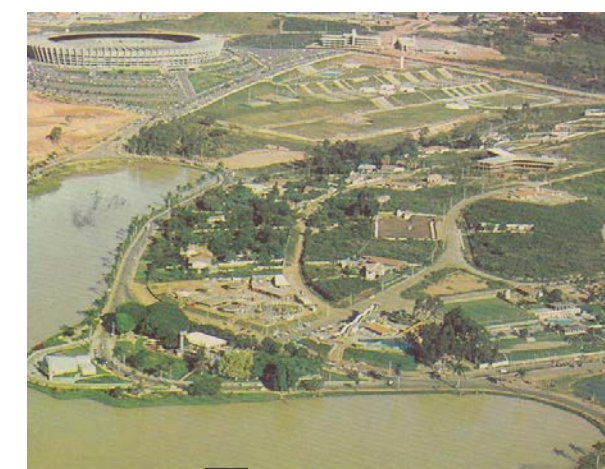
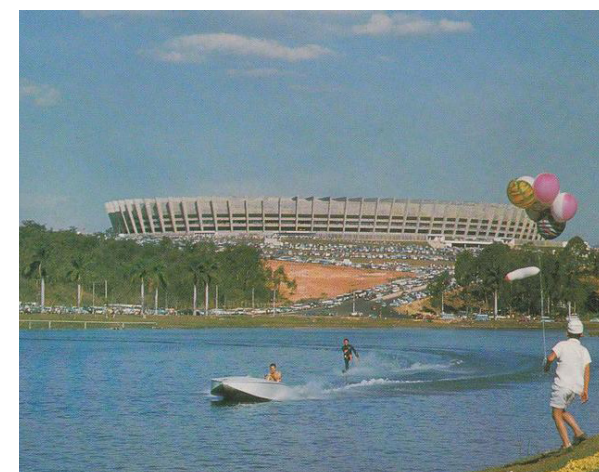


### A Landmark

Today, Pampulha is still famous for being a weekend destination, with among others the Guanabara Park.

### An Island in a Sea of Houses

The old park gave way to a dense and diversified urban fabric as the city swallowed the region in the 70ies.



### The "Sea" of Belo Horizonte

Pampulha lake should have made up for Belo Horizonte's missing beaches. The artificial lake is now polluted and is not as attractive as before.

### An Island in a Sea of Green

By the time of its creation in the 40's, Pampulha was still surrounded by a green area.

### Visions and Reality

As Juscelino Kubitschek had the idea of Pampulha, the artificial lake was meant to be the "Sea of Belo Horizonte" and the whole complex was supposed to be a landmark. Sixty years later, Pampulha is still a touristic feature.

However, the district of Pampulha turns out to be a region of high social disparities, where large residences are close to poor settlements.





### A Giant in a Park

The new Administration Center of Minas Gerais was inaugurated in 2010. The buildings were realized according to plans of Oscar Niemeyer. The complex is located in the old Jockey Club of the government and surrounded by a garden, a lake and a huge parking. Around 3000 persons

are working in the Administration Center. The built area is 270'000 m<sup>2</sup> and the total investment reaches 1,2 billion R\$. The Parc of Serra Verde is not only meant to save a piece of nature in the city but also to keep informal settlements away.



1



2



3



4

### Connections and Disconnections

Shuttle bus lines were created especially for the employees of the Administration Center. There is even a shuttle bus from the car park to the entrance. However, the three huge buildings don't relate to the densely populated area of Venda Nova.

### Afraid of Land Valorisation

"We are all afraid of the increasing prices of the land. Maybe we will have to move because we won't be able to pay for our houses anymore" confides Mariana. The new Administration Center induces a strong land valorisation in the poor surroundings of the district of Venda Nova.

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### High Expectations

The International Airport of Confins opened 1984 as an industrial airport. However, the small Airport of Pampulha continued to receive most of the international flights during 20 years. Since 2005, international flights have been transferred to Confins. Today, the Airport receives

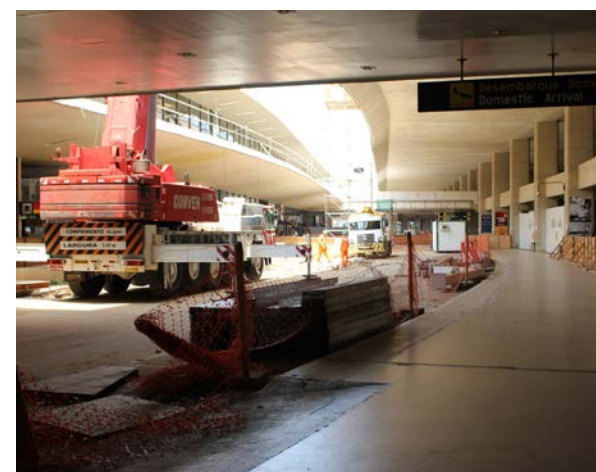
about 5 millions passengers per year. "Expecting 30 million passengers": with the posters hanging in the Airport, the government of Minas Gerais spreads his ambitions. The masterplan, consisting of two new terminals, new landing runways and service area, is already under construction.



1



2



3



### Transforming the Landscape

When the construction began in 1980, huge terracing works were needed to create the artificial plateau supporting the Airport on the carstic ground.







### An Airport City...

The metropolitan Agency plans an Airport City at the south of the Airport. This new city should consist of different areas, divided in high (1), medium (2) and low (3) density residential areas, as well as industrial (4), commercial (5)

and business (6) areas. Some institutional buildings are also planned and the whole area is surrounded by a green area. The city would be served by a train.



### A Rich Landscape

A lot of rivers go through the area, some are underground and some at the surface. The aerotropolis project plans to bring some underground currents at the surface in order to integrate the rivers in the urban space.



### ... in the Countryside?

"No, we don't know what they are planning for this area." answered a family living in the rural area of São José da Lapa.



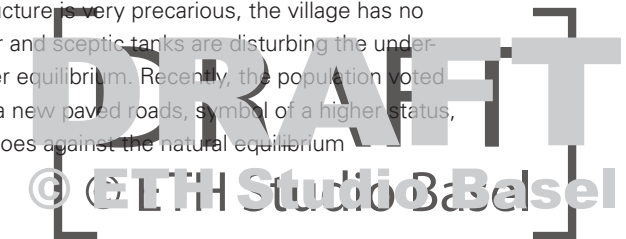
### The Risk of Sinkholes

The high impacts of construction sites, such as the International Airport are causing a disturbance of the naturally equilibrated ground water level and leading to sinkholes.



### Left out of the Development

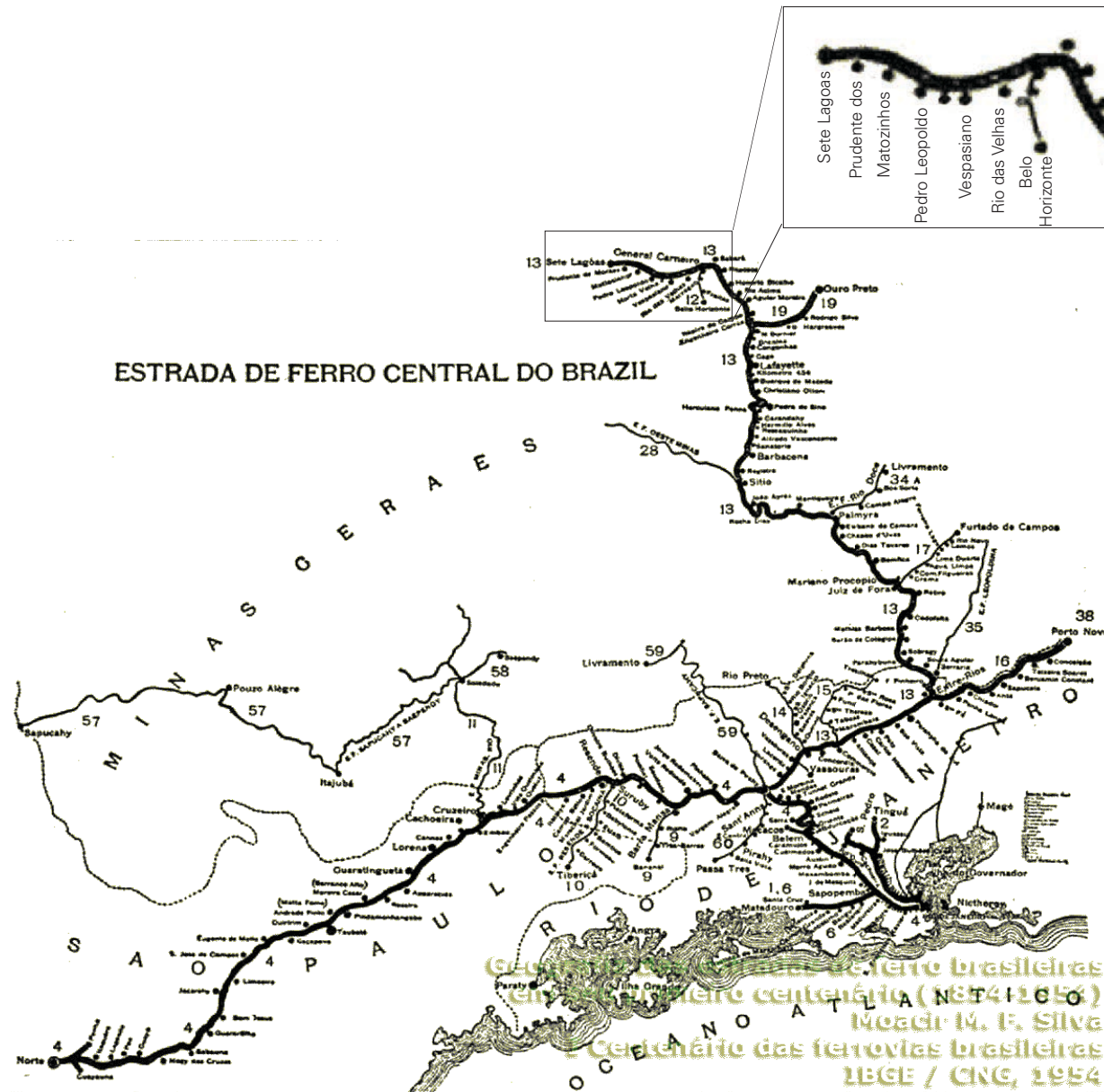
Although the construction of the Airport is generating jobs, the unemployment rate stays high in the village of Confins. The infrastructure is very precarious, the village has no public sewer and septic tanks are disturbing the underground water equilibrium. Recently, the population voted in favour of a new paved roads, symbol of a higher status, although it goes against the natural equilibrium.



## SOIL AND INFRASTRUCTURE

In the 17<sup>th</sup> Century, the land of was mainly occupied by livestock farming. First Urbanisation occurred with the installation of a textile industry in the Village Quinta do Sumidouro along the River Rio das Velhas by Antônio da Silva in 1883, benefiting from the hydraulic potential of same named Waterfalls. This first relevant economic activity was expanded with the railway Station “Cachoeiro Grande” of 1895. Renamed in 1901, after Pedro Leopoldo da Silveira, funcionario of the Central Railway, the city became an independent Municipality.





City Live: A public event on the streets, 1920 Santa Luzia



Santa Luzia today, a leftover from other times



Serving the early textile industry in 1917, Pedro Leopoldo



Residential district Indiará Parc, Pedro Leopoldo



### Railway Stations as Generator

From Rio de Janeiro, passing Belo Horizonte, northwards, trains changed lane at General Carneiro (demolished 1960)

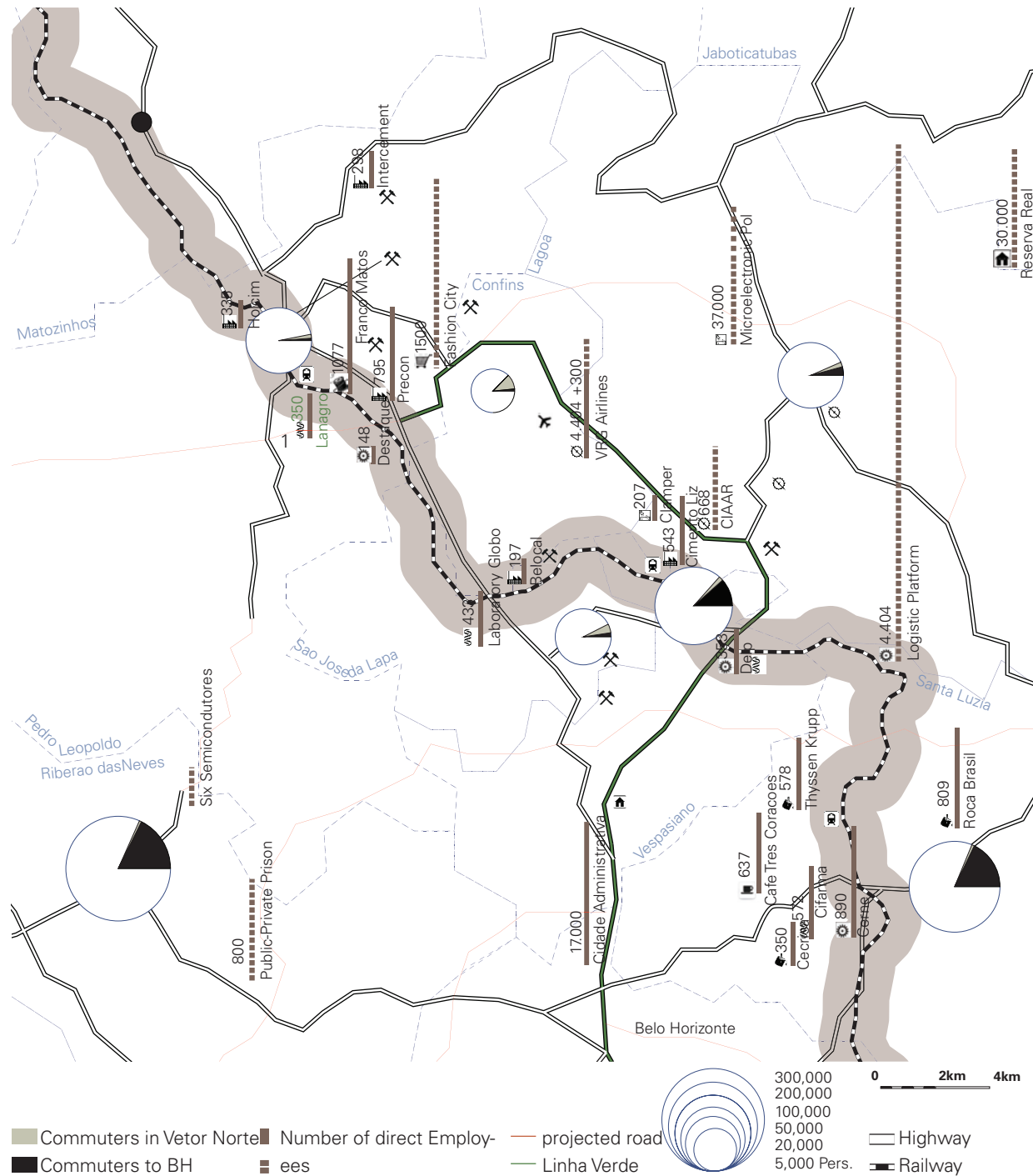


### Historical Cities today 3 Cases

A typical bar at the pedestrian zone in the Center of Vespasiano offering pastry and drinks

### A large Network of Railway

The Inauguration of the Railway System "Estrada do Ferro Central" in Minas Gerais in 1898, mainly used for the transportation of industrial goods, supplied the first economic activities. The Railway Stations of Pedro Leopoldo (1895), Santa Luzia (1893) and Vespasiano (1894) generated early urbanisation processes in the northern region of Belo Horizonte. The generated centrality together with the upcoming industries created the base for the cities' development.



### Independence through productive Industries

In the regions of ancient textile industry, limestone mining, metallurgy and biotechnical industry along the railway, the municipalities benefit from high productivity and several job opportunities for the local population. As a contrast,

Municipalities as Riberão das Neves, grown informally through the city expansion without professional prospects, are highly dependent of the City Center. This leads to frequent daily commuter movement during the rush hours.



### A modern Building

The Lanagro building was built in 1975 from the modernist Vilanova Artigas (FAU São Paulo, 1969)



### Early Biotechnical Industry

Since 1983 this laboratory is dealing with GMO detection, biotechnology, method validation and food safety.

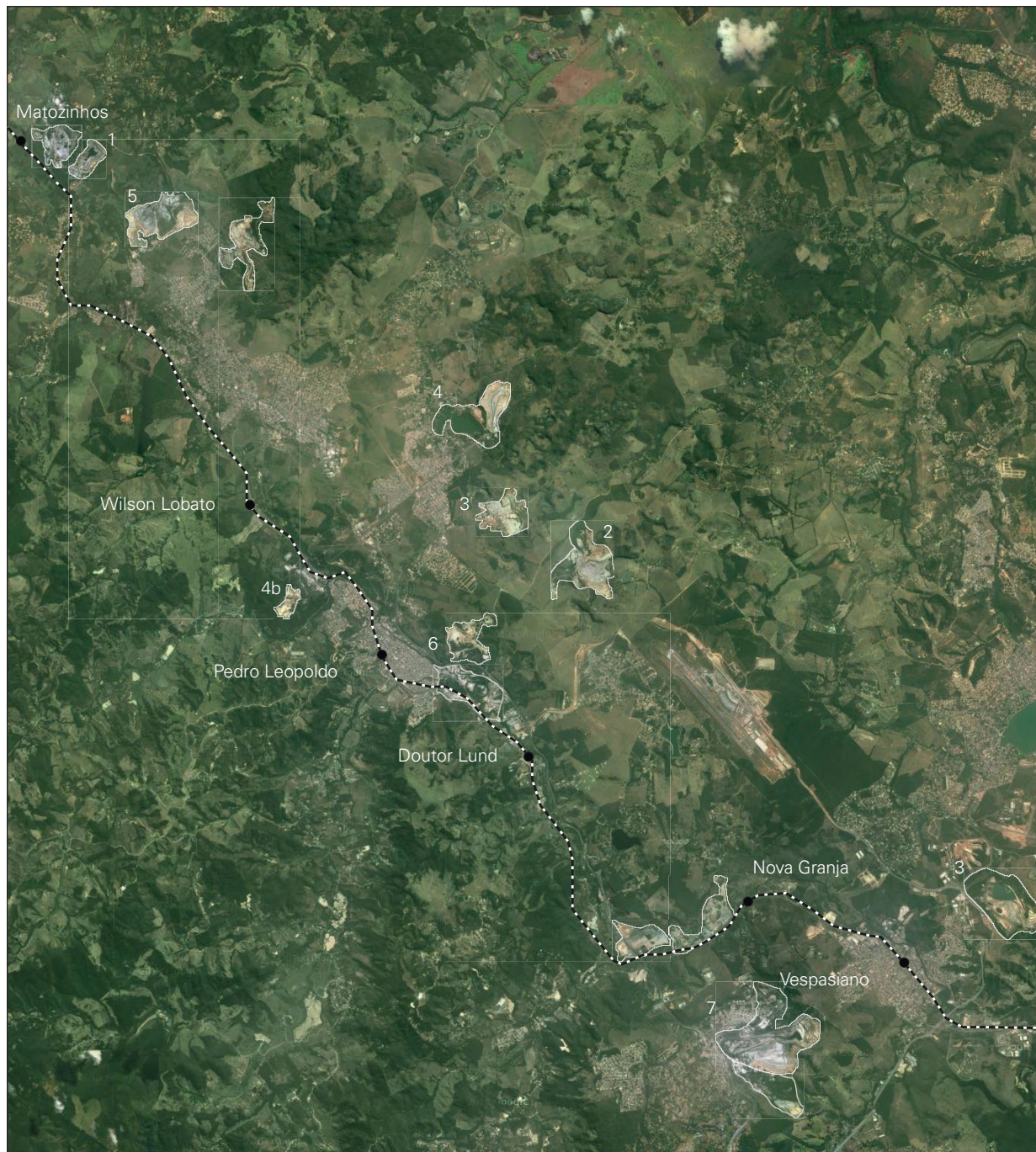


### Lanagro: Federal Institution

In 1983, the federal Ministry of Agriculture launched the subsidiary LANAGRO of Minas Gerais in Pedro Leopoldo. Employing around 350 persons (1), it is one of the largest employers, attracting and training highly educated staff.

Reasons for establishments of Federal Institutions in the North are public owned land and the proximity to the International Airport which benefits of a very central location in Brazil.





-  Railway
-  Railway Station

### Benefiting from the Soil

Due to the carstic mineral soil resources and the provided rail infrastructure of the late 19<sup>th</sup> century, the first limestone Mining began in the 1950's and initiated the cement industry. This sector became both, on regional and national scale, one of the most important economy for Belo Horizonte in the following years.



1



2



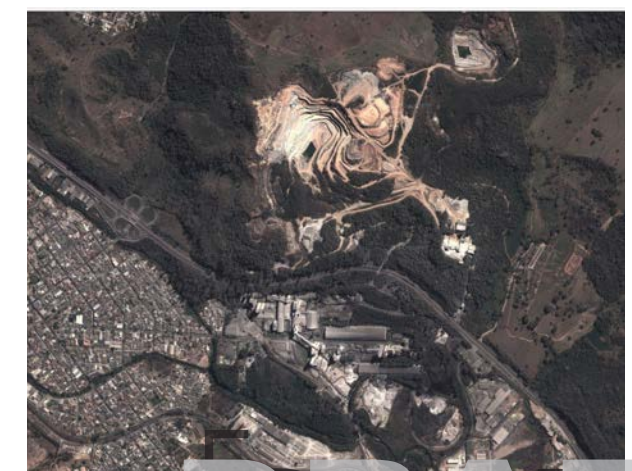
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6

The Mines transforming the landscape (1-2) reaching the cities (3-4) and next to Production Sites (5-6)

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### Omnipresence of Opencast Pit

In Pedro Leopoldo, a noisy band conveyor connecting the mine (4) and the production site (4b) is crossing the city.



### São José da Lapa: A City and a Mine

The Mine of Group Lhoist, former Votorantim in São José da Lapa (7) and the city are growing into each other.

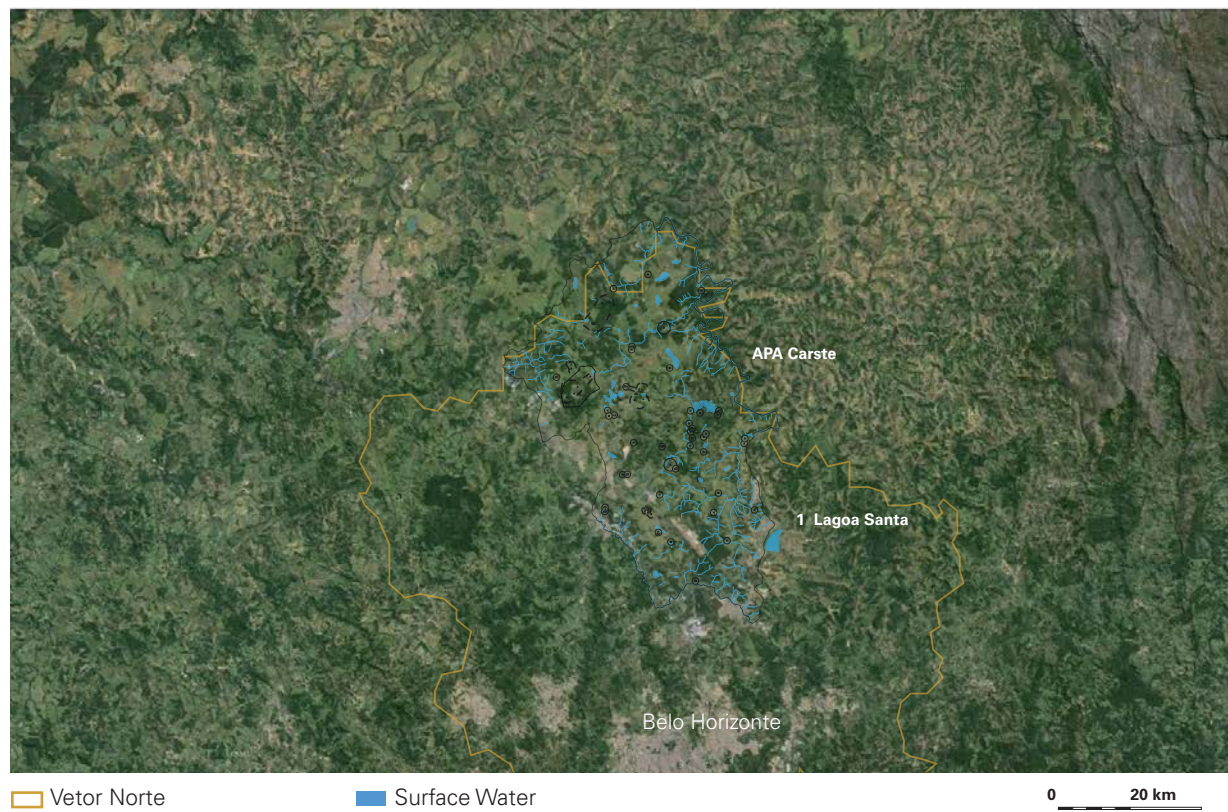


### Cement Production

The Cement Production reaches from 1,700,000 to 2,300,000 tons per year which leads to company rates up to 400 Mio. US\$ per year, each of them providing around 180 to 250 direct, mostly locally awarded, employments.

With more than five Production sites, the northern area of Belo Horizonte is one of the most important Export Region of Cement for Minas Gerais, while most of the products are leaving by trucks towards São Paulo and Rio de Janeiro.





### Benefiting from an Attractive Nature

The attractive natural environment is originally known as Week-end and holiday destination and one of the most common arguments to escape from the City Center. The hydrophic soil properties are articulated in frequent lakes, waterfalls, a very green and saturated vegetation and the appearance of unique carstic caves of high geological interest.



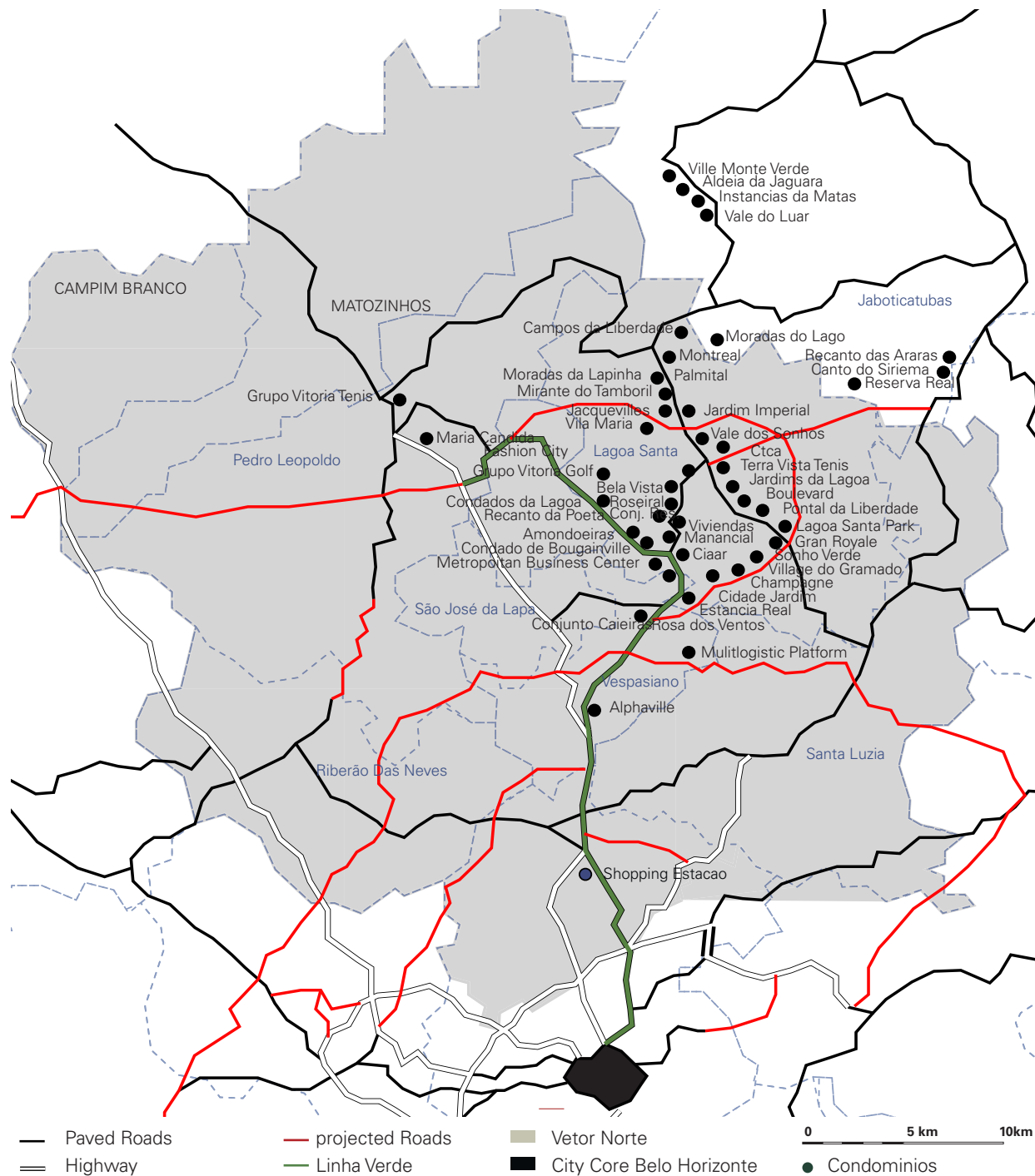
### Leisure

The natural environment invites to enjoy the proximity to water and its leisure possibilities, such as fishing at Lagoa Santa. (1)



### An alternative Coast for Minas Gerais

Enjoying the waterfalls in Serra de Cipó for the week-ends seems to be a satisfying compensation for the lack of seaside in Minas Gerais.



### Radial Roadsystem out of the City

The North became characteristic for secondary residences of the higher income population who enforced its transport connection via highway from the center, generating a spatial diffused urbanisation along the main roads. The escape from the city core became automatised: from the center on the highway, aisle-like through the suburbs, passing along fences of real estate to reach the condominio gate. The former radial centred network is supposed to be expanded in order to decentralise and interconnect new subcenters.



Security gates of fenced communities "condominios"



The urban space reduced to framed roads in Lagoa Santa



### As if running on tracks: the Way Out

With only a few drives in and out, an exclusive bus line, the highway is only allowing one direction: out of the city.

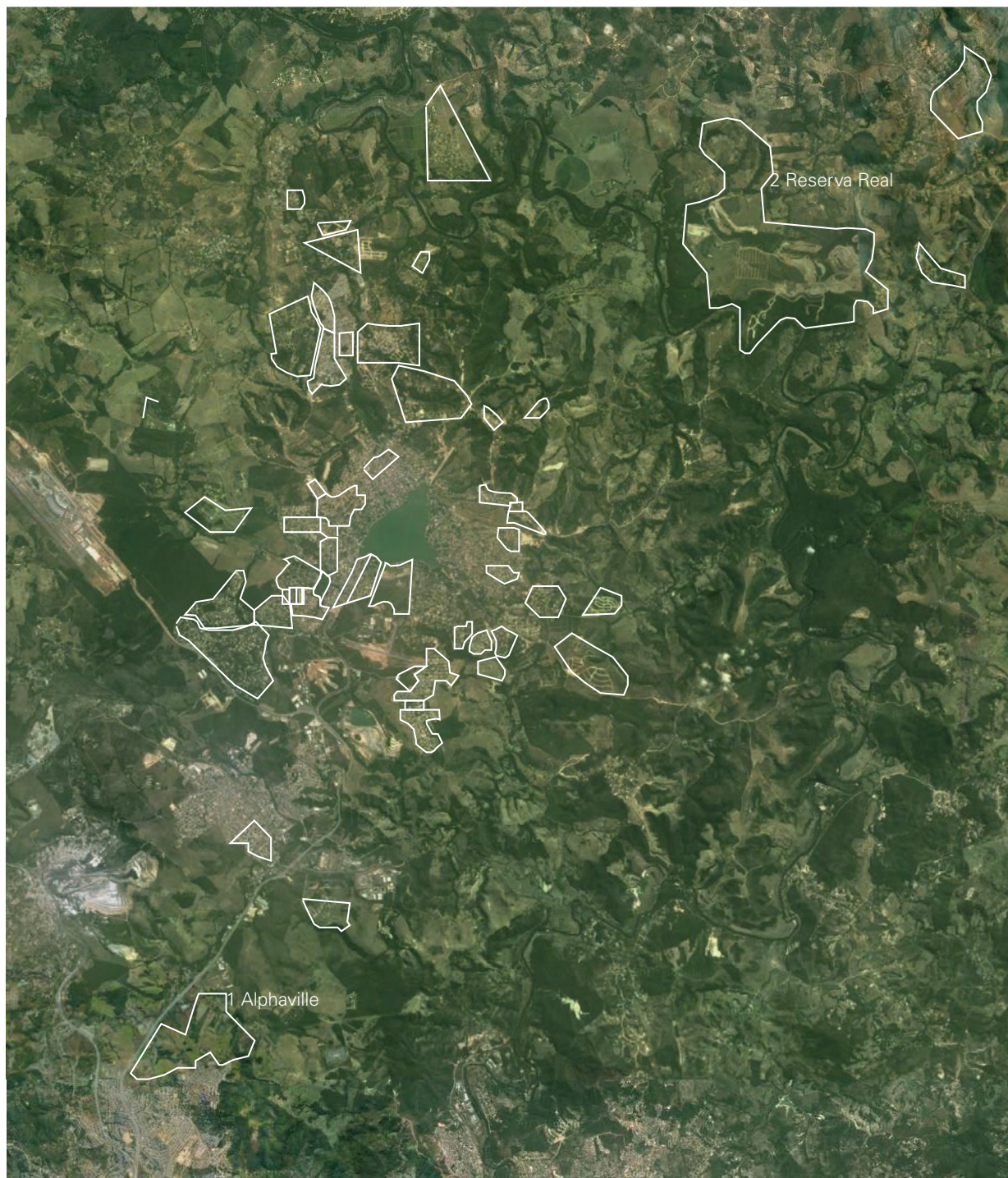


### Segregating Network

In contrast to private motorized transport, outside traffic participants have to adapt their own way: cyclist in front of Alphaville on the highway Linha Verde.







Property Line of the Condominios

### Wall to Wall: A Pattern of Real Estate

The tradition of so called condomínios has its source in weekend and holiday housing of the upper class population. Common arguments for living in a fenced

community are security, one-family housing with private garden, proximity to both nature and centrality via public infrastructure.



### The Process of Settling

Interested customers are buying empty lots provided with infrastructure from the real estate company and are free to construct their own house according to the agreement and regulations of the municipality.



### Inverted Order of Urbanisation

Construction sites start with the provided Infrastructure of the Real Estate companies, the houses will only come with their residents.



### The Concept Alphaville

Following the model of Alphaville in Nova Lima of 1989, the brasilian real estate keeps the concept of the American Edge Town. Occupying 873,238 m<sup>2</sup> along the highway Linha Verde in Vespasiano the company invests about R\$ 70 Milion for 1,500 expected inhabitants.



### Physical Presence

To live up to the safety expectations, condomínios are surrounded by a massive wall marking the geographical and social detachment from the existing neighbourhoods.



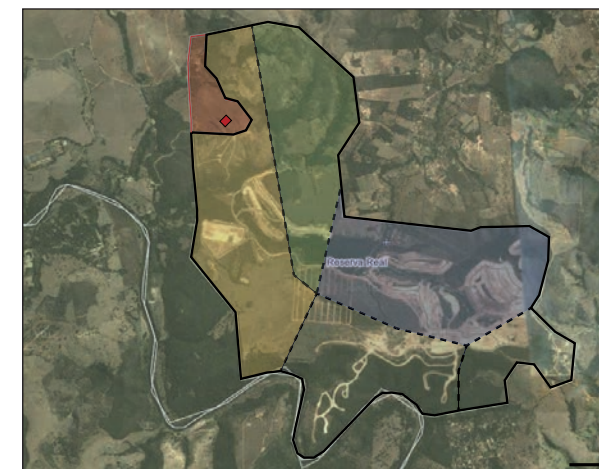


A Stare into Space, Reserva Real (1)



### Landscape à la carte

Modified Landscape: An artificial raised Hill in Reserva Real.




- 0 1 km
- Reserva Real
- former A propriety
- former property line
- former B propriety
- still private land and farm
- former C propriety

### Negotiation with Landowners

The land owner A sold his land to Reserva Real only under the condition to keep his private farm.

**1 Rentabilidade**  
 Comprar uma casa é também um investimento e, hoje, o Vetor Norte é certeza de valorização imobiliária.



The first Reason: a profitable investment

### Object of Speculation

The main argument put forward to buy a slot is rentability: Investing in the Vetor Norte is deemed to be a confident capital asset. Until now, the majority of the Parcels from up 10,000 m<sup>2</sup> are sold. Several parts are bought by large foreign Investors with the objective of reselling which is a proof of the high speculations in this project.

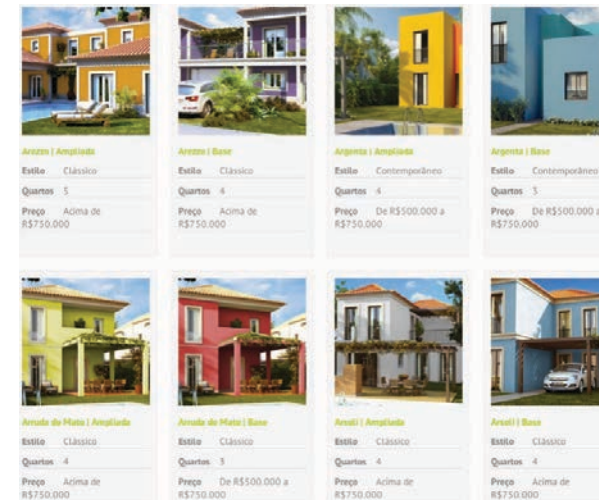




### The Invention of Reserva Real

Designed by the portuguese Grupo Design Resorts and named after the Estrada Real, the Reserva Real will be the largest condominio of Brazil. Its 11 Million square meters in Jaboticatubas are subdivided in four different thematics:

Equestrian, Golf, Fly-In Community, Biovilla and Tennis, together forming the "Prime Community" surrounded by a six meter high fence. Planners expect about 20,000 people and invested more than 1 Billion R\$.



### Life out of the catalogue

The concept relies on environmentally sustainable living with an "eco farm" garden supplied by solar energy and recycled rainwater. Slots ranging from 500 to 700 m<sup>2</sup> come together with a house typology chosen out of a catalogue of 2 styles: contemporary or classic. The Housing are from 500,000 up tu more than 750,000 R\$.



### Cultural City

Inspired from the Navona Square in Rome, this project is a proposal of a new public City within the resort covering the demand of services, business and leisure requirements of the inhabitants. It is supposed to create a new centrality for Jaboticatuba and the Vetor Norte.



Visualisation of Uptown



The Masterplan of Cidade da Cultura "I believe in this", Jose Miguel Martins, President of Design Resorts.

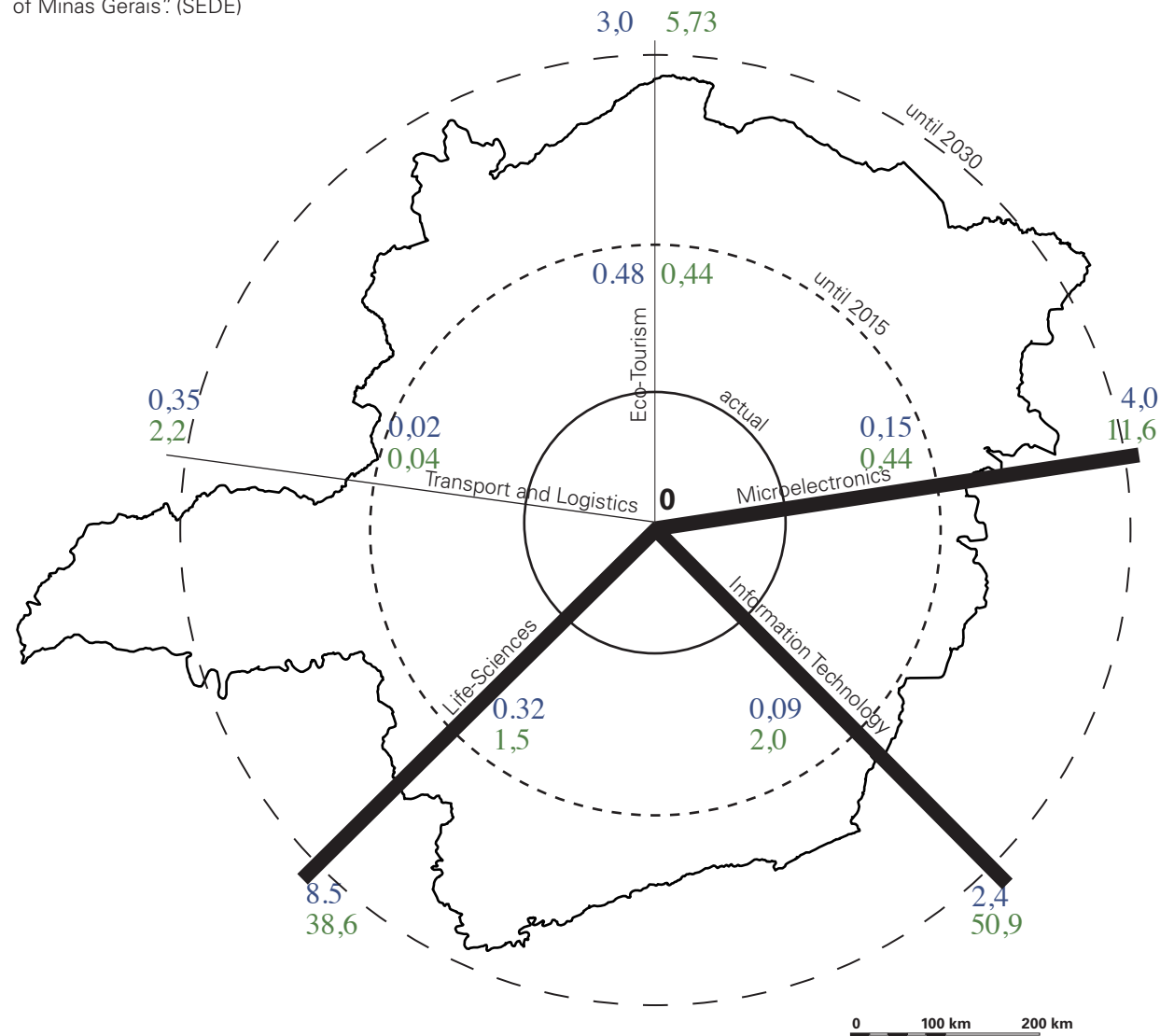


## “THERE IS FREE LAND IN THE NORTH”

**This Citation of Astrid Dias de Assis, Director of AV Norte, an Association of Developers of the Vetor Norte sums up the arguments of private Investors. The Vetor Norte as the projection area of confident visions of an ambitious economic upswing is attracting several regional and international investments.**



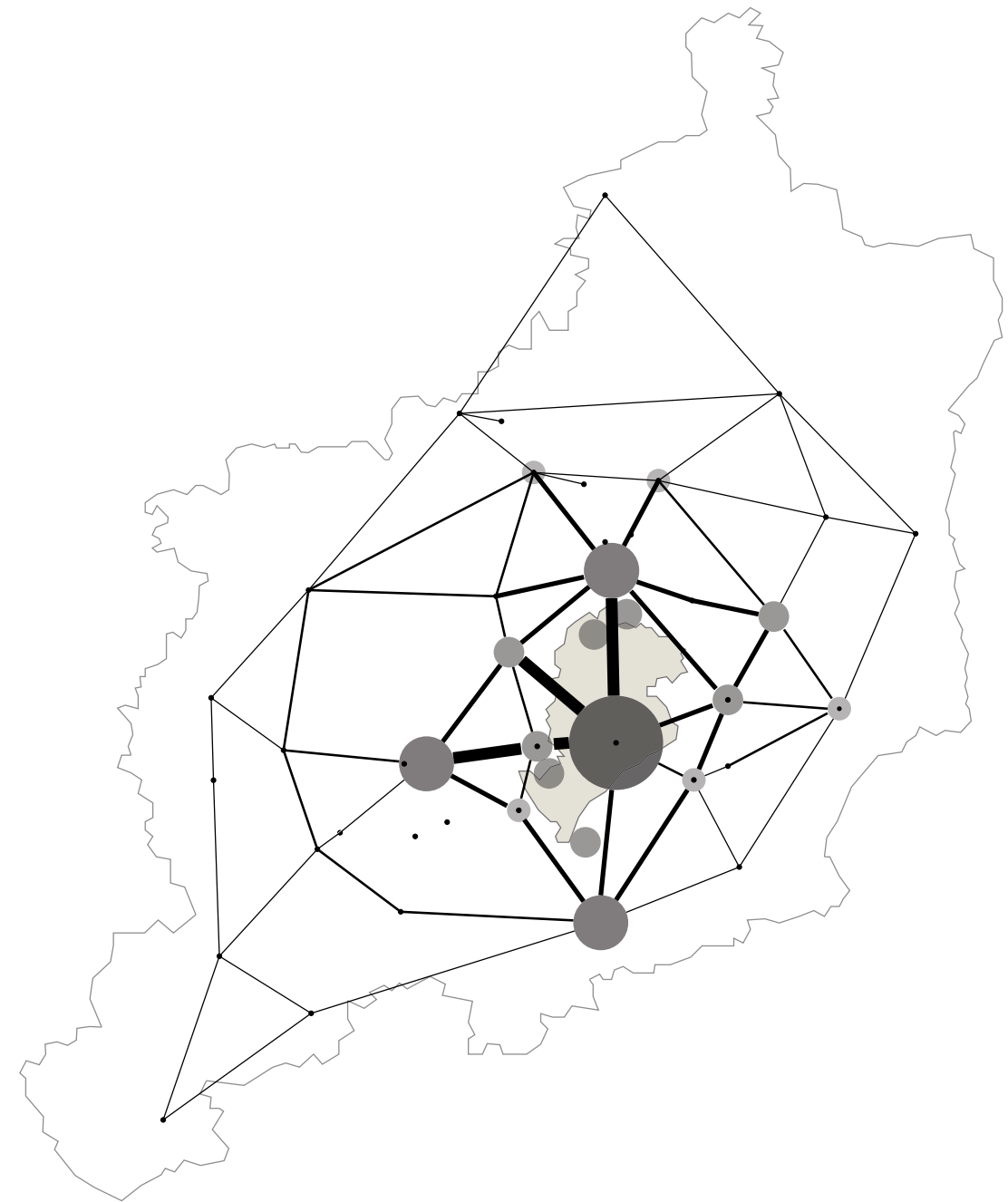
"In 2030, the expected GDP of the Vetor Norte is 172 Billion US\$ which is the actual value of the GDP of the entire State of Minas Gerais." (SEDE)



— Minas Gerais  
 — Targeted total cumulative investments in US\$ Bil  
 — Targeted total cumulative economic value addition US\$ Bil

x6 x17 x27  
 Importance of Growth

**"Match Sao Paulo in Non Traditional Industry Investments by 2030" - SEDE**  
 The Economic Strategy of SEDE (State Department of Economic Development) lays on economic diversification and a shift from traditional mining to future-orientated industries to ensure not only a national but also a global competitiveness.



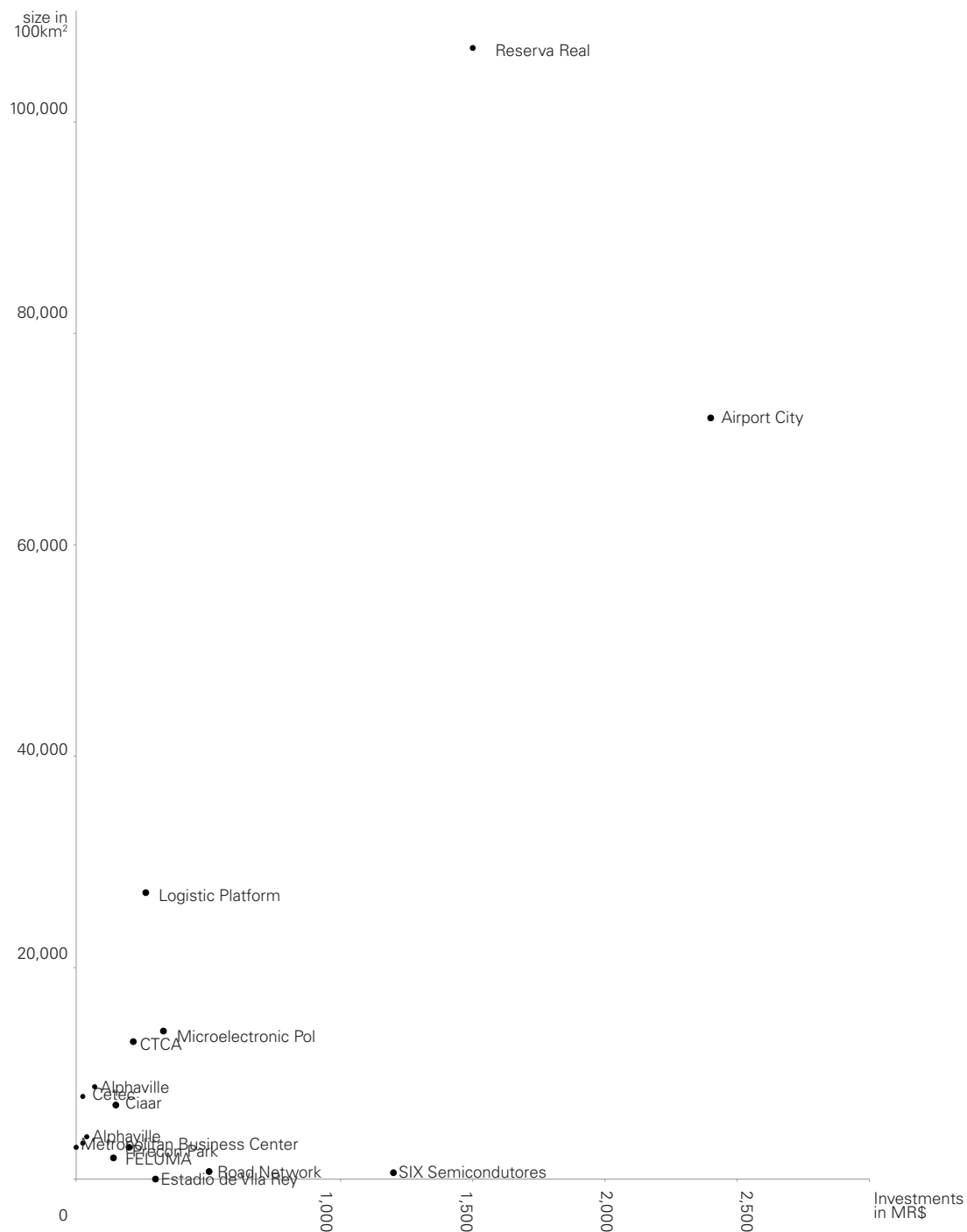
● Metropole  
 ● Metropolitan Center  
 ● Metropolitan Sub-center  
 ● micro-regional center  
 ● local Center

Network of Mobility  
 — high  
 — medium  
 — medium - low  
 — low

**Macro-dynamics - local centralities in the metropolitan region**

The urge of decentralisation goes back on the issues of the concentric city center covering the demand of services of the whole population and concentrating economic, administrative and institutional operations.

**DRAFT**  
 © ETH Studio Basel



### Projects and Planning

The Vetor Norte became an experimental ground for regional and international planners and investors trying to get on board on the expected auspicious economic rebound.



Metropolitan Cathedral, the last project of O. Niemeyer, still planning...



Fashion City Brasil: 200,000 m² in Pedro Leopoldo 2015



First terrain preparations

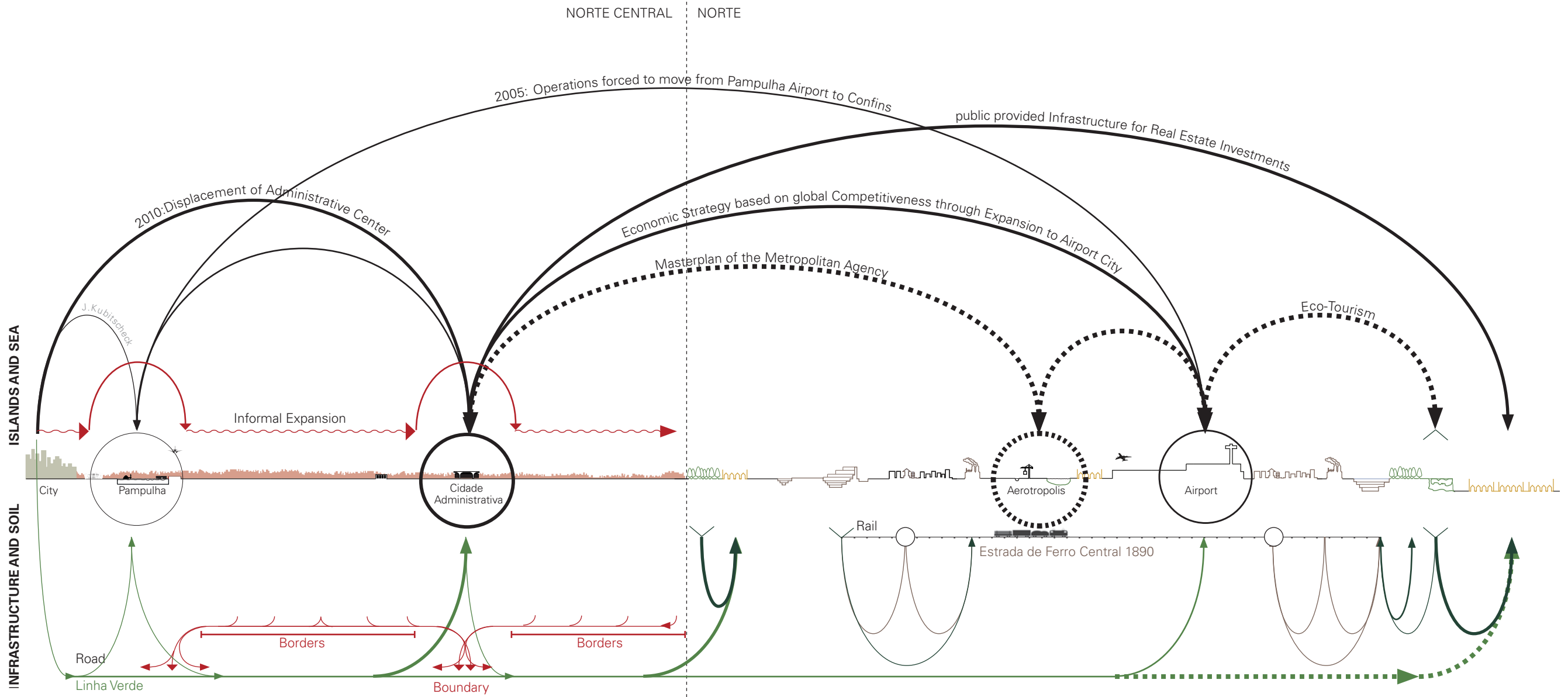


Airport City Confins until 2030, first Constructions



Actual Building Site

**DRAFT**  
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**A Complicated Reality:**

The natural generator of urbanisation of the two Norths, both the informal city expansion and the early independent development through Infrastructure are affected by the public planning Ideas. The punctual Interventions are exposing the population to the confrontation with either border or boundaries of physical and social disparities. The identification of the maintenance of a similar public strategy throughout history is causing a critical outlook on the near future.

○ Public plannend „Islands“  
 ~ Informal sea  
 ■ Real Estate  
 ■ Benefitting from Nature  
 ■ Mining Industry  
 ■ Benefitting from Soil  
 1890 1950 1980 2010

**DR AFT**

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## SOURCES

### Books

APA Carste de Lagoa Santa

### Paper

Study Jurong, SEDE, 2009  
Masterplans of municipalities

### Laws

Legislacao Ambiental, <http://www.siam.mg.gov.br/sla/action/Consulta.do>  
Lei 7166 Normas parcelamento uso ocupação solo  
Lei 10257-01 Estatuto da Cidade

### Maps

The Metropolitan Region, PDDI, 2010  
Masterplan Aerotropolis, AECOM, 2013  
Zoning Map of APA Carste, IEF ICMBio, ...  
Zoning plan of Confins  
Parcelling plan of Lagoa Santa

### Interviews

Ricardo Messias, IEF Instituto Estadual de Florestas, ICM Bio, APA Carste (23 Oktober 2013)

João Paulo Pinto, Grupo Vitoria Uniao (23 October 2013)

Astrid Dias, AV Norte (28 October 2013)

Pedro Barato, Grupo Design Resorts (29 October 2013)

Director of Lanagro MG (30 October 2013)

Mauricio Libanio, Regulizacao Fundiaria Neves (29 October 2013)

Gustavo Horta Palhares, Sandro Oliveira, Agencia de Desenvolvimento RMBH (30 October 2013)

Luiz A. Athayde, Subsecretaria de Investimentos Estratégicos, SEDE Secretario de Estado de Desenvolvimento Economico (31 October 2013)

### Internet

<http://www.agenciaminas.mg.gov.br>  
<http://www.deop.mg.gov.br><http://www.parks.it>  
<http://www.sibillini.net>  
<http://www.gransassolagapark.it>  
<http://www.comune.norcia.pg.it>  
<http://www.comune.cascia.pg.it>  
<http://osbnorcia.org>  
<http://www.siam.mg.gov.br>  
<http://www.reservarealbh.com.br>  
<http://maps.google.com>  
<http://www.wikimapia.com>  
<http://www.institutohorizontes.org.br>  
<http://www.ibge.gov.br/english/>  
<http://www.snic.org.br/>  
<http://opopular.lugarcerto.com.br/>  
<http://portalpbh.pbh.gov.br/>  
<http://www.skyscrapercity.com/>

## IMAGE CREDITS

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P.  
<http://www.google.com/imghp?source=og&sa=N&hl=en&tab=li>  
P.  
<http://jjjound.com/>  
<http://www.ghosttowntgallery.com/htmd/kennecott.htm>  
P. sinkholes  
<http://uretekicr.com/2013/02/06/deep-injection-for-sinkholes/>  
P.  
<http://www.reservarealbh.com.br>  
P. alphaville  
<http://beatrizimoveisbh.blogspot.ch/2012/06/um-novo-alphaville-para-o-vetor-norte.html>  
P.  
[www.osbnorcia.org/](http://www.osbnorcia.org/)  
P.  
<http://www.panoramio.com/photo/29673578>  
<http://www.panoramio.com/photo/32024872>  
P.  
<http://www.biovillas.com/casas/molise-ampliada/>  
P.  
Old picture: <http://curraldelrei.blogspot.ch/2011/07/os-anos-1950-metropolizacao-e-desordem.html>  
P. Pampulha  
UFMG: <https://www.ufmg.br/online/arquivos/007891.shtml>  
Airport: <http://www.skyscraperlife.com/aviation/27517-world-airports-5.html>  
Parque: <http://www.napracinha.com.br/2012/06/gente-se-encontra-no-parque-guanabara.html>  
P.  
Niemeyer: <http://eutopics.wordpress.com/2012/12/08/brasilidade-architecture-and-modernity-oscar-niemeyer-in-pampulha-belo-horizonte-minas-gerais-brasil-1942-43/>  
<http://www.skyscrapercity.com/showthread.php?t=572106&page=7> <http://www.skyscrapercity.com/showthread.php?t=572106&page=7>

## ACKNOWLEDGMENTS

### Persons

Ivana, PUC Minas Gerais  
Walter Hunter, Hunter Consulting  
Marcella Castro, PUC Minas Gerais  
Mateus Alves, PUC Minas Gerais  
Patricia Capanema

### Institutions

PUC Minas Gerais  
UFMG Belo Horizonte